文勇的新托福黄金精选阅读(原黄金29篇)真题[2010年11月26日 6.3版本]

俺常常收到同学们的邮件，要我推荐各种各样阅读材料,问我iBT的复习资料中 Barron, Longman, Delta等等哪个更好。我其实很无奈---因为尽管这些机构很大牌,但**大牌丝毫都不意味着文章"质量高"(比如你可以想想三鹿奶粉)---**说这些机构的文章质量不高,并不是说文字写得不好,而是说这些文章的**句子结构，论述方式，出题思路**与ETS的并不一致(有时候甚至大相径庭)：用这样的材料训练，实在是 事倍功半。

于是，我们实在应该去找找**由 ETS 出的 iBT 文章**来做：（我们能够找到的|由 ETS 编纂的标准 iBT 文章有）

1. OG 之中的 13 篇文章 ；（其中 3 篇为第三版 OG 之中的文章）
2. 15 次（套）TPO 之中的 3*15=45 篇文章 ；
3. 早期 报名之时 ETS 赠送的 3 篇在线测试题
4. ETS 官方给出的模考软件之中抽出的 1 篇文章；

于是这个文档在我的一时兴起之下，出现了：

OG 拿在手上，可以一个个字的敲成电子版；TPO 的所有考试都是在自己的计算机进行，于是可以一边花钱参加考试,一边截图与录像---再利用截下来的图片，逐个的敲下来；早期的 ETS 赠送的 3 篇在线测试题，我也恰好有电子版本；官方的模考软件稍微用点功夫，就能将文章提取并复制

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出来。虽然工作有些繁杂，但总算完成了所有文章的敲打工作。再花了些时间，把这 59 篇文章都做了答案，附在文章的后面。（由于 TPO 之中有 3 篇文章与 OG 中完全重复,于是减去 3 篇,只剩下 59 篇。）同时我还更正了 OG 上几个明显的错误（详见文后附录）当然，我还做出了方便大家理解文章的参考译文，附在文章的后面。

在这 59 篇由 ETS 出的文章没有做完之前，我们实在不应该花时间在任何其他的题目之上。我有时候甚至会对着我的弟兄们高呼：“没有把这 59 篇做 3 遍，你好意思上考场么？你好意思花钱在任何一本垃圾书上面么？ ”

另外，如果你正在准备 iBT-SAT-GRE 的作文部分或者写留学文书，也应该仔细的琢磨一下这些文章：经过 ETS 打磨的文章，无一不是精妙绝伦，极具模仿价值。常常有同学拜托我帮她（他）写 PS，也说起自己的句子怎么看都像是小学生写的（尽管用上了 GRE 里面的单词），于是会随口问我“勇哥，您的写作能力是怎么训练出来的。”我说，“看呗，看呗：托福文章看多了，写作能力自然就提高了。”

“这 ETS 的这些文章真的那么好？”。每当听到这个问题，我都会装做赵本山的样子来一句“谁用谁知道～～”

文勇

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欢迎进行未删节的转载|且不必告诉我你转载到哪里去|都是一个战壕里面的弟兄啊...

告诉大家一个好消息，本文档中的 TPO1-TPO9，以及在线测试题和官方模考题目的解析已经在市面上可以买到了！

（好吧，我承认以下显然是广告部分）：

这本《**托福真题详解-阅读分卷-第一册**》是给弟兄们现在市面上可以获得的 TP01-TP09 阅读部分的文章解析，题目解析，中文翻译和每篇文章的必备词汇：文章解析是为了让大家养成从整体抓文章结构的感觉，题目解析是为了使大家能够在做完题之后**知道正确选项为什么对，错误选项为什么错**——并且因此来培养良好的做题思路，中文翻译是为了帮

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助大家扫除那些自以为理解对但实际理解有误的句子，在每篇文章后面配上必备词汇无非是为了节省大家的一些查单词而已。

另外，这本书还包含了一张 CD（我想你可能第一次听说阅读书籍里面包含 MP3 光盘的）——走在路上的时候，不妨“听一听”阅读文章—不但熟悉词句，甚至还能练练听力呢：）——尽管托福被划分成为了听说读写四个方面，但我想不会有人拒绝在熟悉阅读文本的同时，提高听力。

当当网的链接

http://product.dangdang.com/product.aspx?product_id=20809337&ref=search-0-A

大家有什么建议和想法可以在网上进行评论，我会加以改进

一开始做这件事情的时候，文档之中有不少的typo，还好获得了弟兄们的支持和理解，这个文档的**错误**才慢慢的越变越少。很感激大家对这个文档的关心和帮助，这个文档还是会一直地做下去，为大家提供第一手的托福阅读复习资料。

新增加文章的翻译还在进行当中，请大家耐心等待~:）

既然这些文章都是托福真题,那么它们的出处具体是怎么样的呢？

TPO1 来自网上公布的题目，TPO2 来自OG，TPO3 来自 2006 年 8 月 12 日，

TPO4 来自 2006 年 10 月 8 日，TPO5 来自 2008 年 3 月 8 日，TPO6 来自 2007 年 12 月 10 日

TPO7 来自 2007 年 2 月 24 日/2007 年 12 月 14 日

TPO8 来自 2008 年 2 月 9 日/2008 年 12 月 21 日

TPO9 来自 2008 年 5 月 4 日，TPO10 来自 2008 年 6 月 7 日，

TPO11 来自 2006 年 12 月 8 日（阅读+口语）/2006 年 12 月 15 日（听力+写作）

TPO12 来自 2006 年 12 月 8 日（听力+独立写作）/2006 年 12 月 15 日（阅读+口语）/2007 年 12 月 1 日（综合写作）

TPO13 来自 2006 年 6 月 9 日/2007 年 6 月 30 日

以上统计来自于康老师

http://tw.myblog.yahoo.com/trenton-kang

一个让人热血沸腾的活动：

关于以上宣传的这本书，我考虑了很久，然后在这个文档中留下了奇怪的话：

嘿，朋友，你可以考虑用如下的方式来免费获得本书[或本系列中的任意一本]：

只需在本书内找到5处以上错误，或者改进5处以上的解题方法，即可免费获得本书，详情参见（www.liuwenyong.com）

原因其实很简单：尽管我很期盼，也自以为很尽力，但的确不可能写出一本完全没有错误的书

于是真的需要您的帮助，使我在下一个版本之中，少犯一些错误。

请原谅我的直接。

本文檔由 刘文勇出于个人兴趣制作，由陈睿|李想等协助制作,该行为并不代表任何机构;

注意:文章源自 ETS,

版权啥的自然都来自 ETS,

这一点毫无疑问,

由于教务繁忙,

估计各种错误是少不了的,

如果你发现了错误且有空的话,

就拜托你发邮件告诉我一下吧)

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我都会在文档的附录中标记你的贡献，

若找到五处以上的错误，免费电话答疑；

若找到十处以上直接请吃饭：)

Introduction

Many students sent me E-mail, asking me to recommend some reading materials. Of assorted iBT preparing materials, Barron, Longman, Delta, etc, which is the best? As often as not, I feel at a loss: does brand equal to quality? These branded institutions are highly publicized, however, their passages and questions are not necessarily of quality. Does the brand "Sanlu" mean something to you? "QUALITY and safety are the foundations of social harmony," proclaim posters at the headquarters of the Sanlu Group, until recently one of China's biggest producers of milk powder. Now we all know that Sanlu Scandal has been more than an embarrassment. To say that these "branded" passages are not of quality does not mean they are not stylish, elegant or carefully-written; in fact, I discovered that the passage types, sentence patterns, arguing methods, and arrangement of questions are not quite consistent with, and sometimes even wildly divergent from those of ETS. I reflect that practicing with these materials cannot expect a satisfactory result. At this, we should collect ETS's original passages and questions. Such passages available include:

1. 13 passages in Official Guide (OG);
2. 15 sets from TPO, with 3 passages included in each set, 45 passages in total;
3. 3 passages provided by ETS to the applicants for a test on line in the early time of iBT,
4. 1 passage extracted from the simulated exam software provided by ETS;
   (3 passages in TPO are abstracted from OG, so they are exactly the same)

Then, I cannot resist the temptation to make such a text: I typed every letter of the 13 passages in OG into computer; I paid dollars for the TPO and completed it myself, filming the screen and capturing every page. Then I typed all the passages with the help of videos and captured pictures. The 3 passages in the on-line test happened to be available to me; and as for the one passage in the simulated exam, though with a little difficulty, I nevertheless succeeded make an electronic text of it. Of course, I finished all these questions and attached the answer to end of this text. Eventually, the final "deluxe" edition of this text, including 59 passages in aggregate (3 passages in TPO are abstracted from OG, so they are exactly the same. Then taking 3 from 62 leaves 59 passages at last.) I insist that before carefully finished and studied these 59 passages, we should not let ourselves distracted by any other materials. Sometimes, I yelled to my students, only a joke, "If you had not studied these passages and questions 3 times at least, how could you be barefaced enough to sit in the exam room? Shame on you to waste your mother's money buying other costly books!"

In addition, have you got ants in your pants every time you make a stab at writing? Do you go berserk for your personal statement? If you are preparing for the iBT, SAT, GRE, etc, writing, essays, or your personal statement, these passages can also be of help: polished by ETS, words, sentence, and structures of these passages are "epic...", and worth imitating for none-native English users. Frequently, friends asked me to help with their personal statement, complaining why what they had written looked so

naïve, immature and awkward, even littered with those “glorious noble” GRE words (Actually, these words made their personal statement even freak!). And they asked, “Wenyong, my brother, how you forged your impressive writing skills?” I said, “Read! Read! And read again! The more you read, the better you write.” “Are these iBT passages really so amazing?” I affected a tone of a comedian, “try them!”

How good can these passages be? “They are golden, they are precious, they are diamonds!”

Yours

Wenyong

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APPLIED ARTS AND FINE ARTS

Although we now tend to refer to the various crafts according to the materials used to construct them-clay, glass, wood, fiber, and metal-it was once common to think of crafts in terms of function, which led to their being known as the "applied arts." Approaching crafts from the point of view of function, we can divide them into simple categories: containers, shelters and supports. There is no way around the fact that containers, shelters, and supports must be functional. The applied arts are thus bound by the laws of physics, which pertain to both the materials used in their making and the substances and things to be contained, supported, and sheltered. These laws are universal in their application, regardless of cultural beliefs, geography, or climate. If a pot has no bottom or has large openings in its sides, it could hardly be considered a container in any traditional sense. Since the laws of physics, not some arbitrary decision, have determined the general form of applied-art objects, they follow basic patterns, so much so that functional forms can vary only within certain limits. Buildings without roofs, for example, are unusual because they depart from the norm. However, not all functional objects are exactly alike; that is why we recognize a Shang Dynasty vase as being different from an Inca vase. What varies is not the basic form but the incidental details that do not obstruct the object's primary function.

Sensitivity to physical laws is thus an important consideration for the maker of applied-art objects. It is often taken for granted that this is also true for the

maker of fine-art objects. This assumption misses a significant difference between the two disciplines. Fine-art objects are not constrained by the laws of physics in the same way that applied-art objects are. Because their primary purpose is not functional, they are only limited in terms of the materials used to make them. Sculptures must, for example, be stable, which requires an understanding of the properties of mass, weight distribution, and stress. Paintings must have rigid stretchers so that the canvas will be taut, and the paint must not deteriorate, crack, or discolor. These are problems that must be overcome by the artist because they tend to intrude upon his or her conception of the work. For example, in the early Italian Renaissance, bronze statues of horses with a raised foreleg usually had a cannonball under that hoof. This was done because the cannonball was needed to support the weight of the leg. In other words, the demands of the laws of physics, not the sculptor's aesthetic intentions, placed the ball there. That this device was a necessary structural compromise is clear from the fact that the cannonball quickly disappeared when sculptors learned how to strengthen the internal structure of a statue with iron braces (iron being much stronger than bronze).

Even though the fine arts in the twentieth century often treat materials in new ways, the basic difference in attitude of artists in relation to their materials in the fine arts and the applied arts remains relatively constant. It would therefore not be too great an exaggeration to say that practitioners of the fine arts work to overcome the limitations of their materials, whereas those engaged in the applied arts work in concert with their materials.

Paragraph 1: Although we now tend to refer to the various crafts according to the materials used to construct them-clay, glass, wood, fiber, and metal-it was once common to think of crafts in terms of function, which led to their being known as the "applied arts." Approaching crafts from the point of view of function, we can divide them into simple categories: containers, shelters and supports. There is no way around the fact that containers, shelters, and supports must be functional. The applied arts are thus bound by the laws of physics, which pertain to both the materials used in their making and the substances and things to be contained, supported, and sheltered. These laws are universal in their application, regardless of cultural beliefs, geography, or climate. If a pot has no bottom or has large openings in its sides, it could hardly be considered a container in any traditional sense. Since the laws of physics, not some arbitrary decision, have determined the general form of applied-art objects, they follow basic patterns, so much so that functional forms can vary only within certain limits. Buildings without roofs, for example, are unusual because they depart from the norm. However, not all functional objects are exactly alike; that is why we recognize a Shang Dynasty vase as being different from an Inca vase. What varies is not the basic form but the incidental details that do not obstruct the object's primary function.

3. The word they in the passage refers to

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○Applied-art objects

○The laws of physics

○Containers

○The sides of pots

4. Which of the following best expresses the essential information in the highlighted sentence? Incorrect answer choices change the meaning in important ways or leave out essential information.

○Functional applied-art objects cannot vary much from the basic patterns determined by the laws of physics.

○The function of applied-art objects is determined by basic patterns in the laws of physics.

○Since functional applied-art objects vary only within certain limits, arbitrary decisions cannot have determined their general form.

○The general form of applied-art objects is limited by some arbitrary decision that is not determined by the laws of physics.

Paragraph 2: Sensitivity to physical laws is thus an important consideration for the maker of applied-art objects. It is often taken for granted that this is also true for the maker of fine-art objects. This assumption misses a significant difference between the two disciplines. Fine-art objects are not constrained by the laws of physics in the same way that applied-art objects are. Because their primary purpose is not functional, they are only limited in terms of the materials used to

make them. Sculptures must, for example, be stable, which requires an understanding of the properties of mass, weight distribution, and stress. Paintings must have rigid stretchers so that the canvas will be taut, and the paint must not deteriorate, crack, or discolor. These are problems that must be overcome by the artist because they tend to intrude upon his or her conception of the work. For example, in the early Italian Renaissance, bronze statues of horses with a raised foreleg usually had a cannonball under that hoof. This was done because the cannonball was needed to support the weight of the leg. In other words, the demands of the laws of physics, not the sculptor's aesthetic intentions, placed the ball there. That this device was a necessary structural compromise is clear from the fact that the cannonball quickly disappeared when sculptors learned how to strengthen the internal structure of a statue with iron braces (iron being much stronger than bronze).

5. According to paragraph 2, sculptors in the Italian Renaissance stopped using cannonballs in bronze statues of horses because

○They began using a material that made the statues weigh less

○They found a way to strengthen the statues internally

○The aesthetic tastes of the public had changed over time

○The cannonballs added too much weight to the statues

6. Why does the author discuss the bronze statues of horses created by artists in the early Italian Renaissance?

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○To provide an example of a problem related to the laws of physics that a fine artist must overcome

○To argue that fine artists are unconcerned with the laws of physics

○To contrast the relative sophistication of modern artists in solving problems related to the laws of physics

○To note an exceptional piece of art constructed without the aid of technology

7. An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

This passage discusses fundamental differences between applied-art objects and fine-art objects.

●

●

●

Answer Choices

○Applied-art objects fulfill functions, such as containing or sheltering, and objects with the same function have similar characteristics because they are constrained by their purpose.

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○It is easy to recognize that Shang Dynasty vases are different from Inca vases.

○Fine-art objects are not functional, so they are limited only by the properties of the materials used.

○Renaissance sculptors learned to use iron braces to strengthen the internal structures of bronze statues.

○In the twentieth century, fine artists and applied artists became more similar to one another in their attitudes toward their materials.

○In all periods, fine artists tend to challenge the physical limitations of their materials while applied artists tend to cooperate with the physical properties of their materials.

8. Directions: Complete the table below to summarize information about the two types of art discussed in the passage. Match the appropriate statements to the types of art with which they are associated. *This question is worth 3 points.*

TYPES OF ART STATEMENTS

The Applied Arts Select 3

-
-
-

The Fine Arts Select 2

-
-

Statements

- An object's purpose is primarily aesthetic.
- Objects serve a functional purpose.
- The incidental details of objects do not vary.
- Artists work to overcome the limitations of their materials.
- The basic form of objects varies little across cultures.
- Artists work in concert with their materials.
- An object's place of origin is difficult to determine.

参考答案：

3. ○1

4. ○1

5. ○2

6. ○1

7. ○1, 3, 6

8. ○2, 5, 6

○1, 4

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参考译文

实用艺术和创造艺术

在现代，人们将根据工艺品的制造材质对他们进行分类，如陶土，玻璃，木头，纤维还有金属。但最初人们根据工艺品的功能将他们通通定义为“实用工艺品”。根据工艺品的实用性，我们可以把手工艺品简单分为：容器，遮蔽物，支撑物。毫无疑问它们都是具有一定功能的物品。这些实用工艺品以自然规律为基础，它们的制作材料及其容纳、支撑、遮盖的内容需要符合这些规律。这些规律在工艺品应用过程中非常普遍，不会因文化信仰、地理条件和气候的改变而改变。如果一个壶没有底座，或者在一侧有一个大开口，那么它在任何传统意义上都很难被视为是一个容器。自然规律决定了实用工艺品的一般形式，而不是武断的结论决定的，它们遵循基本的样式，以至于它们的功能不会变化太大。举个例子，没有屋顶的建筑是很少见的，因为它违反了自然规律。但是，并不是所有的功能物品都一模一样，比如我们知道的为什么商代花瓶和印加花瓶不同。它们的区别不是基本功能的不同，而是那些不影响其基本功能的细节存在区别。

实用工艺品的生产者会着重考虑这件工艺品对自然规律的敏感性。所以人们认为对纯工艺品的生产来说也是一样。但这种推断忽略了两种工艺品之间重要的区别。纯工艺品不像实用工艺品那样会受到自然规律的限制。因为它们最主要的并不是体现其功能性，其实它们仅受限于制作材料的性质。比方说雕塑必须要牢固，这就需要了解质量，重力分布和压力的性质。油画必须有坚固的支架，才能让画布保持绷紧，并且油画不可以有毁损，

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裂纹，褪色。类似困难都是艺术家们必须克服的，这些困扰往往影响了艺术家对于工艺品的设计。就好像在意大利文艺复兴早期，踢出前腿马匹的青铜像往往有一个金属球置于它的前蹄下。这样设计是因为需要金属球来支撑腿的重量。换而言之，摆在那里的金属球是客观条件的需要，而不是艺术家的美学意愿。当雕塑家学会如何了用铁支架加强雕塑的内部结构后（铁比青铜更结实），就不再使用金属球了，由此看来，铁球的使用是对于必要结构性的妥协。

尽管在 20 世纪纯工艺品的制作通常采用新的制造工艺，人们对两种工艺品的基本态度仍然保持对立。因此，毫不夸张地说，纯艺术工艺品的生产者需要克服原材料的限制进行生产，而从事实用性工艺品的生产者则依据材料的性质来进行生产。

THE ORIGINS OF CETACEANS

It should be obvious that cetaceans-whales, porpoises, and dolphins-are mammals. They breathe through lungs, not through gills, and give birth to live young. Their streamlined bodies, the absence of hind legs, and the presence of a fluke1 and blowhole2 cannot disguise their affinities with land dwelling mammals. However, unlike the cases of sea otters and pinnipeds (seals, sea lions, and walruses, whose limbs are functional both on land and at sea), it is not easy to envision what the first whales looked like. Extinct but already fully marine cetaceans are known from the fossil record. How was the gap between a walking mammal and a swimming whale bridged? Missing until recently were fossils clearly intermediate, or transitional, between land mammals and cetaceans.

Very exciting discoveries have finally allowed scientists to reconstruct the most likely origins of cetaceans. In 1979, a team looking for fossils in northern Pakistan found what proved to be the oldest fossil whale. The fossil was officially named *Pakicetus* in honor of the country where the discovery was made. *Pakicetus* was found embedded in rocks formed from river deposits that were 52 million years old. The river that formed these deposits was actually not far from an ancient ocean known as the Tethys Sea.

The fossil consists of a complete skull of an archaeocyte, an extinct group of ancestors of modern cetaceans. Although limited to a skull, the *Pakicetus* fossil

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provides precious details on the origins of cetaceans. The skull is cetacean-like but its jawbones lack the enlarged space that is filled with fat or oil and used for receiving underwater sound in modern whales. *Pakicetus* probably detected sound through the ear opening as in land mammals. The skull also lacks a blowhole, another cetacean adaptation for diving. Other features, however, show experts that *Pakicetus* is a transitional form between a group of extinct flesh-eating mammals, the mesonychids, and cetaceans. It has been suggested that *Pakicetus* fed on fish in shallow water and was not yet adapted for life in the open ocean. It probably bred and gave birth on land.

Another major discovery was made in Egypt in 1989. Several skeletons of another early whale, *Basilosaurus,* were found in sediments left by the Tethys Sea and now exposed in the Sahara desert. This whale lived around 40 million years ago, 12 million years after *Pakicetus.* Many incomplete skeletons were found but they included, for the first time in an archaeocyte, a complete hind leg that features a foot with three tiny toes. Such legs would have been far too small to have supported the 50-foot-long *Basilosaurus* on land. *Basilosaurus* was undoubtedly a fully marine whale with possibly nonfunctional, or vestigial, hind legs.

An even more exciting find was reported in 1994, also from Pakistan. The now extinct whale *Ambulocetus natans* ("the walking whale that swam") lived in the Tethys Sea 49 million years ago. It lived around 3 million years after *Pakicetus* but 9 million before *Basilosaurus.* The fossil luckily includes a good portion of the

hind legs. The legs were strong and ended in long feet very much like those of a modern pinniped. The legs were certainly functional both on land and at sea. The whale retained a tail and lacked a fluke, the major means of locomotion in modern cetaceans. The structure of the backbone shows, however, that *Ambulocetus* swam like modern whales by moving the rear portion of its body up and down, even though a fluke was missing. The large hind legs were used for propulsion in water. On land, where it probably bred and gave birth, *Ambulocetus* may have moved around very much like a modern sea lion. It was undoubtedly a whale that linked life on land with life at sea

1. Fluke: the two parts that constitute the large triangular tail of a whale
2. "Blowhole: a hole in the top of the head used for breathing

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Paragraph 1: It should be obvious that cetaceans-whales, porpoises, and dolphins-are mammals. They breathe through lungs, not through gills, and give birth to live young. Their streamlined bodies, the absence of hind legs, and the presence of a fluke3 and blowhole4 cannot disguise their affinities with land-dwelling mammals. However, unlike the cases of sea otters and pinnipeds (seals, sea lions, and walruses, whose limbs are functional both on land and at sea), it is not easy to envision what the first whales looked like. Extinct but, already fully marine cetaceans are known from the fossil record. How was the gap between a

walking mammal and a swimming whale bridged? Missing until recently were fossils clearly intermediate, or transitional, between land mammals and cetaceans.

1. In paragraph 1, what does the author say about the presence of a blowhole in cetaceans?

○It clearly indicates that cetaceans are mammals.

○It cannot conceal the fact that cetaceans are mammals.

○It is the main difference between cetaceans and land-dwelling mammals.

○It cannot yield clues about the origins of cetaceans.

2. Which of the following can be inferred from paragraph 1 about early sea otters?

○It is not difficult to imagine what they looked like

○There were great numbers of them.

○They lived in the sea only.

○They did not leave many fossil remains.

Paragraph 3: The fossil consists of a complete skull of an archaeocyte, an extinct group of ancestors of modern cetaceans. Although limited to a skull, the *Pakicetus* fossil provides precious details on the origins of cetaceans. The skull is cetacean-like but its jawbones lack the enlarged space that is filled with fat or oil and used for receiving underwater sound in modern whales. *Pakicetus* probably detected sound through the ear opening as in land mammals. The skull also lacks a

blowhole, another cetacean adaptation for diving. Other features, however, show experts that *Pakicetus* is a transitional form between a group of extinct flesh-eating mammals, the mesonychids, and cetaceans. It has been suggested that *Pakicetus* fed on fish in shallow water and was not yet adapted for life in the open ocean. It probably bred and gave birth on land.

3. The word precious in the passage is closest in meaning to

○Exact

○Scarce

○Valuable

○Initial

4. Pakicetus and modern cetaceans have similar

○Hearing structures

○Adaptations for diving

○Skull shapes

○Breeding locations

5. The word it in the passage refers to

○Pakicetus

○Fish

○Life

○ocean

Paragraph 4: Another major discovery was made in Egypt in 1989. Several skeletons of another early whale, *Basilosaurus*, were found in sediments left by the Tethys Sea and now exposed in the Sahara desert. This whale lived around 40 million years ago, 12 million years after *Pakicetus*. Many incomplete skeletons were found but they included, for the first time in an archaeocyte, a complete hind leg that features a foot with three tiny toes. Such legs would have been far too small to have supported the 50-foot-long *Basilosaurus* on land. *Basilosaurus* was undoubtedly a fully marine whale with possibly nonfunctional, or vestigial, hind legs.

6. The word exposed in the passage is closest in meaning to

○Explained

○Visible

○Identified

○Located

7. The hind leg of Basilosaurus was a significant find because it showed that Basilosaurus

○Lived later than Ambulocetus natans

○Lived at the same time as Pakicetus

○Was able to swim well

○Could not have walked on land

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8. It can be inferred that Basilosaurus bred and gave birth in which of the following locations

○On land

○Both on land and at sea

○In shallow water

○In a marine environment

Paragraph 5: An even more exciting find was reported in 1994, also from Pakistan. The now extinct whale *Ambulocetus natans* ("the walking whale that swam") lived in the Tethys Sea 49 million years ago. It lived around 3 million years after *Pakicetus* but 9 million before *Basilosaurus.* The fossil luckily includes a good portion of the hind legs. The legs were strong and ended in long feet very much like those of a modern pinniped. The legs were certainly functional both on land and at sea. The whale retained a tail and lacked a fluke, the major means of locomotion in modern cetaceans. The structure of the backbone shows, however, that *Ambulocetus* swam like modern whales by moving the rear portion of its body up and down, even though a fluke was missing. The large hind legs were used for propulsion in water. On land, where it probably bred and gave birth, *Ambulocetus* may have moved around very much like a modern sea lion. It was undoubtedly a whale that linked life on land with life at sea

9. Why does the author use the word luckily in mentioning that the

Ambulocetus natans fossil included hind legs?

○Fossil legs of early whales are a rare find.

○The legs provided important information about the evolution of cetaceans.

○The discovery allowed scientists to reconstruct a complete skeleton of the whale.

○Until that time, only the front legs of early whales had been discovered.

10. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage?

Incorrect choices change the meaning in important ways or leave out essential information.

○Even though Ambulocetus swam by moving its body up and down, it did not have a backbone.

○The backbone of Ambulocetus, which allowed it to swim, provides evidence of its missing fluke.

○Although Ambulocetus had no fluke, its backbone structure shows that it swam like modern whales.

○By moving the rear parts of their bodies up and down, modern whales swim in a different way from the way Ambulocetus swam.

11. The word propulsion in the passage is closest in meaning to

○Staying afloat

○Changing direction

○Decreasing weight

○Moving forward

Paragraph 1: Extinct but already fully marine cetaceans are known from the fossil record. ■How was the gap between a walking mammal and a swimming whale bridged? ■Missing until recently were fossils clearly intermediate, or transitional, between land mammals and cetaceans.■Very exciting discoveries have finally allowed scientists to reconstruct the most likely origins of cetaceans. ■In 1979, a team looking for fossils in northern Pakistan found what proved to be the oldest fossil whale.

12. Look at the four squares [■] that indicate where the following sentence can be added to the passage.

This is a question that has puzzled scientists for ages.

Where would the sentence best fit?

13-14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some answer choices do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

This passage discusses fossils that help to explain the likely origins of cetaceans-whales, porpoises, and dolphins.

●

●

●

Answer Choices

○Recent discoveries of fossils have helped to show the link between land mammals and cetaceans.

○The discovery of Ambulocetus natans provided evidence for a whale that lived both on land and at sea.

○The skeleton of Basilosaurus was found in what had been the Tethys Sea, an area rich in fossil evidence.

○Pakicetus is the oldest fossil whale yet to be found.

○Fossils thought to be transitional forms between walking mammals and swimming whales were found.

○Ambulocetus' hind legs were used for propulsion in the water.

参考答案

1. ○2

This is a Factual Information question asking for specific information that can be found in paragraph 1. Choice 2 is the best answer. It is essentially a rephrasing of the statement in paragraph 1 that blowholes cannot disguise cetaceans' affinities with other mammals. The other three choices are refuted, either directly or indirectly, by that paragraph.

2. ○1

This is an Inference question asking for information that can be inferred from paragraph 1 . Choice 1 is the best answer because paragraph 1 says that sea otters are unlike early mammals whose appearances are not easy to imagine. By inference, then, the early appearance of sea otters must be easy (or not difficult) to imagine.

3. ○3

This is a Vocabulary question. The word being tested is precious. It is highlighted in the passage. The correct answer is choice 3, "valuable." Anything that is precious is very important and therefore valuable.

4. ○3

This is a Factual Information question asking for specific information that can be found in the passage. Choice 3 is the best answer. Paragraph 3 describes the

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differences and similarities between *Pakicetus* and modern cetaceans. Sentence 3 of that paragraph states that their skulls are similar. The other three choices describe differences, not similarities.

5. ○1

This is a Reference question. The word being tested is It. That word is highlighted in the passage. This is a simple pronoun referent item. Choice I , "*Pakicetus*" is the correct answer. The word It here refers to a creature that probably bred and gave birth on land. *Pakicetus* is the only one of the choices to which this could apply.

6. ○2

This is a Vocabulary question. The word being tested is exposed. It is highlighted in the passage. The correct answer is choice 2, "visible." Exposed means "uncovered." A skeleton that is uncovered can be seen. Visible means "can be seen."

7. ○ 4

This is a Factual Information question asking for specific information that can be found in the passage. Choice 4 is the best answer because it is the only detail about the skeleton of *Basilosaurus* mentioned in paragraph 4, meaning that it is significant. Choice 1 is true, but it is not discussed in the detail that choice 4 is, and does not represent the significance of the discovery. Choice 3 is not

mentioned, and choice 2 is not :me.

8. ○4

This is an Inference question asking for a conclusion that can be drawn from the entire passage. Choice 4 is the best answer based on the last sentence of paragraph 4, which describes *Basilosaurus* as a fully marine whale. That implies that everything it did, including breeding and giving birth, could have been done only in a marine environment.

9. ○2

This is an Inference question asking for a conclusion that can be drawn from the passage. Paragraph 5 explains that this discovery provided important information to scientists that they might not have been able to obtain without it. Therefore, you can infer that the discovery was a "lucky" one. The passage offers no support for the other choices. Therefore, choice 2 is the best answer.

10. ○3

This is a Sentence Simplification question. As with all of these items, a single sentence in the passage is highlighted:

The structure of the backbone shows, however, that *Ambulocetus* swam like modern whales by moving the rear portion of its body up and down, even though a fluke was missing.

Choice 3 is the best answer because it contains all of the essential information

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in the highlighted sentence. Choice 1 is not true because *Ambulocetus* did have a backbone. Choice 2 is not true because the sentence says that the backbone showed how the *Ambulocetus* swam, not that it was missing a fluke. Choice 4 is untrue because the sentence states that *Ambulocetus* and modern whales swam in the same way.

11. ○4

This is a Vocabulary question. The word being tested is propulsion. It is highlighted in the passage. Choice 4, "moving forward" is the best answer because it means the action of propelling. The whale in the sentence used its hind legs to push itself forward in the water.

12. ○2

This is an Insert Text question. You can see the four black squares in paragraphs 1 and 2 that represent the possible answer choices here.

Extinct but already fully marine cetaceans are known from the fossil record. ■ How was the gap between a walking mammal and a swimming whale bridged? ■Missing until recently were fossils clearly intermediate, or transitional, between land mammals and cetaceans. ■ Very exciting discoveries have finally allowed scientists to reconstruct the most likely origins of cetaceans. ■ In 1979. a team looking for fossils in northern Pakistan found what proved to be the oldest fossil whale.

The sentence provided is **"This is a question that has puzzled scientists for ages."** The best place to insert it is at square 2. The sentence that precedes square 2 is in the form of a rhetorical question and the inserted sentence explicitly provides a response to it. None of the other sentences preceding squares is a question, so the inserted sentence cannot logically follow any one of them.

13-14. ○1, 2, 5

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参考译文

鲸类的起源

众所周知，鲸类动物是哺乳动物,如鲸鱼、鼠海豚和海豚。它们用肺呼吸，而不是鳃，属于胎生。鲸类动物呈 流线型的身体，后腿的消失，尾片和气孔的出现，这些特征都不能掩饰它们和陆生哺乳动物的相似之处。然而，想知道世上第一只鲸长什么样并非易事，不像还原海獭及鳍足类动物（四肢水陆两用如海豹，海狮，海象）的原貌那么简单。一些完全水生的鲸类动物虽然已经灭绝，但仍可通过化石来对它们进行考察。陆栖哺乳动物和海洋鲸类之间有何联系？近期发现的化石已经可以很清晰地帮助人们了解这个问题，以及他们之间的过渡关系。

科学家们通过一些令人振奋的发现重现了鲸类动物几近真实的起源。1979 年，在巴基斯坦北部，一个寻找化石的考察队发掘到了最古老的鲸鱼化石。这块化石被官方命名为 Pakicifus，以纪念人们发现它的地方。这块化石是在一条河的沉积岩中发现的，这条河有 5200 万年的历史，离古地中海不远

Pakicifus 包括一个完整原始动物的头盖骨，它的主人是现代鲸类的祖先。尽管只是个头盖骨，但它却提供了研究原始鲸类动物起源的珍贵信息。这个头盖骨和鲸类动物的很像，但它的下颌骨和现代鲸类略有不同，现代鲸类动物的下颌骨中含有额外的空间储存脂肪或者油脂来吸收水下的声音。Pakicifus 的主人可能会像陆生哺乳动物那样通过张开的耳朵来探

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测声音。另外，这个头盖骨没有呼吸孔，而鲸类动物有，这便是鲸类动物为了适应水生环境的另一种适应性表现。然而，专家认为 Pakicifus 的其它特征表明它们是已灭绝的食肉哺乳动物（中兽科动物）和鲸类动物的过渡型。有人认为 Pakicifus 靠吃浅水的鱼类为生，未能适应在辽阔的大海里生活。它们很有可能在陆地进行生育繁殖。

1989 年，在埃及有了另一个重大发现。人们在古地中海残留的沉积物中发现了另一类早期鲸鱼 Basilosaurus 的一些骨骸，这些骨骸如今暴露在撒哈拉大沙漠上。Basilosaurus 生活在大约 4000 万年前，比 Pakicifus 鲸鱼晚了 1200 万年。尽管发现的这些骨骼并不完整，但这是专家们第一次在原始动物身上发现完整的后肢，它有三个小脚趾作为的足部特征。可这些后肢还太小，远无法支撑 50 英尺长的 Basilosaurus 在陆地行走。因此，Basilosaurus 必定是完全水生的鲸鱼，它们的后肢已经不起任何作用，或者说已经退化

1994 年，巴基斯坦报道了一个更令人兴奋的发现。目前已经灭绝的鲸鱼 Ambulocetus natans（可以步行的鲸类）4900 万年前曾在古地中海生活过。比 Pakicetus 晚大约 300 万年，比 Basilosaurus 早 900 万年左右。幸运的是，被发现的 Ambulocetus natans 保留着完整的后肢。它的后肢很强壮，底部有长足，非常像现在的鳍足类动物。这些后肢使得他们既能在陆地行走又能在海里游行。虽然 Ambulocetus natans 保留了尾巴，但它们缺少现代水生鲸类动物用于行动的主要身体部位——尾片。不过，从 Ambulocetus 的脊椎结构上可以看出，即使缺少尾片，它们也能像现代鲸

鱼那样通过身体背部的上下摆动来游走。大的后肢通常被当作是水中前行的发动机。在它们可能交配繁殖的陆地上，Ambulocetus 行动起来非常像现代海狮。毫无疑问，鲸鱼是连接着陆地生命和海洋生命的物种。

DESERT FORMATION

The deserts, which already occupy approximately a fourth of the Earth's land surface, have in recent decades been increasing at an alarming pace. The expansion of desertlike conditions into areas where they did not previously exist is called desertification. It has been estimated that an additional one-fourth of the Earth's land surface is threatened by this process.

Desertification is accomplished primarily through the loss of stabilizing natural vegetation and the subsequent accelerated erosion of the soil by wind and water. In some cases the loose soil is blown completely away, leaving a stony surface. In other cases, the finer particles may be removed, while the sand-sized particles are accumulated to form mobile hills or ridges of sand.

Even in the areas that retain a soil cover, the reduction of vegetation typically results in the loss of the soil's ability to absorb substantial quantities of water. The impact of raindrops on the loose soil tends to transfer fine clay particles into the tiniest soil spaces, sealing them and producing a surface that allows very little water penetration. Water absorption is greatly reduced; consequently runoff is increased, resulting in accelerated erosion rates. The gradual drying of the soil caused by its diminished ability to absorb water results in the further loss of vegetation, so that a cycle of progressive surface deterioration is established.

In some regions, the increase in desert areas is occurring largely as the result of a trend toward drier climatic conditions. Continued gradual global warming has produced an increase in aridity for some areas over the past few thousand years. The process may be accelerated in subsequent decades if global warming resulting from air pollution seriously increases.

There is little doubt, however, that desertification in most areas results primarily from human activities rather than natural processes. The semiarid lands bordering the deserts exist in a delicate ecological balance and are limited in their potential to adjust to increased environmental pressures. Expanding populations are subjecting the land to increasing pressures to provide them with food and fuel. In wet periods, the land may be able to respond to these stresses. During the dry periods that are common phenomena along the desert margins, though, the pressure on the land is often far in excess of its diminished capacity, and desertification results.

Four specific activities have been identified as major contributors to the desertification processes: overcultivation, overgrazing, firewood gathering, and overirrigation. The cultivation of crops has expanded into progressively drier regions as population densities have grown. These regions are especially likely to have periods of severe dryness, so that crop failures are common. Since the raising of most crops necessitates the prior removal of the natural vegetation, crop failures leave extensive tracts of land devoid of a plant cover and susceptible to wind and

water erosion.

The raising of livestock is a major economic activity in semiarid lands, where grasses are generally the dominant type of natural vegetation. The consequences of an excessive number of livestock grazing in an area are the reduction of the vegetation cover and the trampling and pulverization of the soil. This is usually followed by the drying of the soil and accelerated erosion.

Firewood is the chief fuel used for cooking and heating in many countries. The increased pressures of expanding populations have led to the removal of woody plants so that many cities and towns are surrounded by large areas completely lacking in trees and shrubs. The increasing use of dried animal waste as a substitute fuel has also hurt the soil because this valuable soil conditioner and source of plant nutrients is no longer being returned to the land.

The final major human cause of desertification is soil salinization resulting from overirrigation. Excess water from irrigation sinks down into the water table. If no drainage system exists, the water table rises, bringing dissolved salts to the surface. The water evaporates and the salts are left behind, creating a white crustal layer that prevents air and water from reaching the underlying soil.

The extreme seriousness of desertification results from the vast areas of land and the tremendous numbers of people affected, as well as from the great difficulty

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of reversing or even slowing the process. Once the soil has been removed by erosion, only the passage of centuries or millennia will enable new soil to form. In areas where considerable soil still remains, though, a rigorously enforced program of land protection and cover-crop planting may make it possible to reverse the present deterioration of the surface.

Paragraph 1: The deserts, which already occupy approximately a fourth of the Earth's land surface, have in recent decades been increasing at an alarming pace. The expansion of desertlike conditions into areas where they did not previously exist is called desertification. It has been estimated that an additional one-fourth of the Earth's land surface is threatened by this process.

1. The word threatened in the passage is closest in meaning to

○Restricted

○Endangered

○Prevented

○Rejected

Paragraph 3: Even in the areas that retain a soil cover, the reduction of vegetation typically results in the loss of the soil's ability to absorb substantial quantities of water. The impact of raindrops on the loose soil tends to transfer fine

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clay particles into the tiniest soil spaces, sealing them and producing a surface that allows very little water penetration. Water absorption is greatly reduced; consequently runoff is increased, resulting in accelerated erosion rates. The gradual drying of the soil caused by its diminished ability to absorb water results in the further loss of vegetation, so that a cycle of progressive surface deterioration is established.

2. According to paragraph 3, the loss of natural vegetation has which of the following consequences for soil?

- ○Increased stony content
- ○Reduced water absorption
- ○Increased numbers of spaces in the soil
- ○Reduced water runoff

Paragraph 5: There is little doubt, however, that desertification in most areas results primarily from human activities rather than natural processes. The semiarid lands bordering the deserts exist in a delicate ecological balance and are limited in their potential to adjust to increased environmental pressures. Expanding populations are subjecting the land to increasing pressures to provide them with food and fuel. In wet periods, the land may be able to respond to these stresses. During the dry periods that are common phenomena along the desert margins, though, the pressure on the land is often far in excess of its diminished capacity, and desertification results.

3. The word delicate in the passage is closest in meaning to

○Fragile

○Predictable

○Complex

○Valuable

4. According to paragraph 5, in dry periods, border areas have difficulty

○Adjusting to stresses created by settlement

○Retaining their fertility after desertification

○Providing water for irrigating crops

○Attracting populations in search of food and fuel

Paragraph 6: Four specific activities have been identified as major contributors to the desertification processes: overcultivation, overgrazing, firewood gathering, and overirrigation. The cultivation of crops has expanded into progressively drier regions as population densities have grown. These regions are especially likely to have periods of severe dryness, so that crop failures are common. Since the raising of most crops necessitates the prior removal of the natural vegetation, crop failures leave extensive tracts of land devoid of a plant cover and susceptible to wind and water erosion.

5. The word progressively in the passage is closest in meaning to

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○Openly

○Impressively

○Objectively

○Increasingly

6. According to paragraph 6, which of the following is often associated with raising crops?

○Lack of proper irrigation techniques

○Failure to plant crops suited to the particular area

○Removal of the original vegetation

○Excessive use of dried animal waste

7. The phrase devoid of in the passage is closest in meaning to

○Consisting of

○Hidden by

○Except for

○Lacking in

Paragraph 9: The final major human cause of desertification is soil salinization resulting from over irrigation. Excess water from irrigation sinks down into the water table. If no drainage system exists, the water table rises, bringing dissolved salts to the surface. The water evaporates and the salts are left behind, creating a white crustal layer that prevents air and water from reaching the

underlying soil.

8. According to paragraph 9, the ground's absorption of excess water is a factor in desertification because it can

○Interfere with the irrigation of land

○Limit the evaporation of water

○Require more absorption of air by the soil

○Bring salts to the surface

9. All of the following are mentioned in the passage as contributing to desertification EXCEPT

○Soil erosion

○Global warming

○Insufficient irrigation

○The raising of livestock

Paragraph 10: The extreme seriousness of desertification results from the vast areas of land and the tremendous numbers of people affected, as well as from the great difficulty of reversing or even slowing the process. Once the soil has been removed by erosion, only the passage of centuries or millennia will enable new soil to form. In areas where considerable soil still remains, though, a rigorously enforced program of land protection and cover-crop planting may make it possible to reverse the present deterioration of the surface.

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10. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage?

Incorrect choices change the meaning in important ways or leave out essential information.

○Desertification is a significant problem because it is so hard to reverse and affects large areas of land and great numbers of people.

○Slowing down the process of desertification is difficult because of population growth that has spread over large areas of land.

○The spread of deserts is considered a very serious problem that can be solved only if large numbers of people in various countries are involved in the effort.

○Desertification is extremely hard to reverse unless the population is reduced in the vast areas affected.

11. It can be inferred from the passage that the author most likely believes which of the following about the future of desertification?

○Governments will act quickly to control further desertification.

○The factors influencing desertification occur in cycles and will change in the future.

○Desertification will continue to increase.

○Desertification will soon occur in all areas of the world.

Paragraph 7:■The raising of livestock is a major economic activity in semiarid lands, where grasses are generally the dominant type of natural vegetation. ■The consequences of an excessive number of livestock grazing in an area are the reduction of the vegetation cover and the trampling and pulverization of the soil. ■This is usually followed by the drying of the soil and accelerated erosion.■

12. Look at the four squares [■] that indicate where the following sentence can be added to the passage.

This economic reliance on livestock in certain regions makes large tracts of land susceptible to overgrazing.

Where would the sentence best fit?

13-14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some answer choices do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

Many factors have contributed to the great increase in desertification in recent decades.

-
-

●

Answer Choices

○Growing human populations and the agricultural demands that come with such growth have upset the ecological balance in some areas and led to the spread of deserts.

○As periods of severe dryness have become more common, failures of a number of different crops have increased.

○Excessive numbers of cattle and the need for firewood for fuel have reduced grasses and trees, leaving the land unprotected and vulnerable.

○Extensive irrigation with poor drainage brings salt to the surface of the soil, a process that reduces water and air absorption.

○Animal dung enriches the soil by providing nutrients for plant growth.

○Grasses are generally the dominant type of natural vegetation in semiarid lands.

参考答案：

1. ○2

This is a Vocabulary question. The word being tested is threatened. It is highlighted in the passage. To threaten means to speak or act as if you will cause harm to someone or something. The object of the threat is in danger of being hurt, so the correct answer is choice 2, "endangered."

2. ○2

This is a Factual Information question asking for specific information that can be found in paragraph 3. The correct answer is choice 2, reduced water absorption. The paragraph explicitly states that the reduction of vegetation greatly reduces water absorption. Choice 4, reduced water runoff, explicitly contradicts the paragraph, so it is incorrect. The "spaces in the soil" are mentioned in another context: the paragraph does not say that they increase, so choice 3 is incorrect. The paragraph does not mention choice 1.

3. ○1

This is a Vocabulary question. The word being tested is delicate. It is highlighted in the passage. The correct answer is choice 1, "fragile," meaning "easily broken." Delicate has the same meaning as "fragile."

4. ○1

This is a Factual Information question asking for specific information that can

be found in paragraph 5. The correct answer is choice 1: border areas have difficulty "adjusting to stresses created by settlement." The paragraph says that "expanding populations," or settlement, subject border areas to "pressures," or stress, that the land may not "be able to respond to." Choice 2 is incorrect because the paragraph does not discuss "fertility" after desertification. Choice 3 is also incorrect because "irrigation" is not mentioned here. The paragraph mentions "increasing populations" but not the difficulty of "attracting populations," so choice 4 is incorrect.

5. ○4

This is a Vocabulary question. The word being tested is *progressively*. It is highlighted in the passage. The correct answer is choice 4, "increasingly." Progressively as it is used here means "more," and "more" of something means that it is increasing.

6. ○3

This is a Factual Information question asking for specific information that can be found in paragraph 6. The correct answer is choice 3, "removal of the original vegetation." Sentence 4 of this paragraph says that "the raising of most crops necessitates the prior removal of the natural vegetation," an explicit statement of answer choice 3. Choice 1, lack of proper irrigation techniques, is incorrect because the paragraph mentions only "overirrigation" as a cause of desertification. No irrigation "techniques" are discussed. Choices 2 and 4,

failure to plant suitable crops and use of animal waste, are not discussed.

7. ○4

This is a Vocabulary question. A phrase is being tested here, and all of the answer choices are phrases. The phrase is "devoid of." It is highlighted in the passage. "Devoid of' means "without," so the correct answer is choice 4, "lacking in." If you lack something that means you are without that thing.

8. ○4

This is a Factual Information question asking for specific information that can be found in paragraph 9. The correct answer is choice 4, "bring salts to the surface." The paragraph says that the final human cause of desertification is salinization resulting from overirrigation. The paragraph goes on to say that the overirrigation causes the water table to rise, bringing salts to the surface. There is no mention of the process "interfering" with or "limiting" irrigation, or of the "amount of air" the soil is required to absorb, so choices 1,2, and 3 are all incorrect.

9. ○3

This is a Negative Factual Information question asking for specific information that can be found in the passage. Choice 3, "insufficient irrigation," is the correct answer. Choice 1, "soil erosion," is explicitly mentioned in paragraph 2 as one of the primary causes of desertification, so it is not the correct answer.

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Choice 2, "global warning," is mentioned as a cause of desertification in paragraph 4, so it is incorrect. Choice 4, "raising of livestock," is described in paragraph 7 as another cause of desertification, so it is incorrect. The passage includes excessive irrigation as a cause of desertification, but not its opposite, insufficient irrigation, so that is the correct answer.

10. ○1

This is a Sentence Simplification question. As with all of these items, a single sentence in the passage is highlighted:

The extreme seriousness of desertification results from the vast areas of land and the tremendous numbers of people affected, as well as from the great difficulty of reversing or even slowing the process.

The correct answer is choice 1. That choice contains all of the **essential** information in the highlighted sentence and does not change its meaning. The only substantive difference between choice 1 and the tested sentence is the order in which he information is presented. Two clauses in the highlighted sentence, "The great difficulty of reversing the process" and "the numbers of people affected," have simply been reversed; no meaning has been changed, and no information has been removed. Choices 2,3, and 4 are all incorrect because they change the meaning of the highlighted sentence.

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11. ○3

This is an Inference question asking for an inference that can be supported by the passage. The correct answer is choice 3; the passage suggests that the author believes "Desertification will continue to increase." The last paragraph of the passage says that slowing or reversing the erosion process will be very difficult, but that it may occur in those areas that are not too affected already if rigorously enforced anti-erosion processes are implemented. Taken together, this suggests that the author is not confident this until happen; therefore, it can be inferred that he thinks erosion will continue. The passage provides no basis for inferring choices 1, 2, or 4.

12. ○2

This is an Insert Text question. You can see the four black squares in paragraph

7 that represent the possible answer choices here:

■The raising of live stock is a major economic activity in semiarid lands, where grasses are generally the dominant type of natural vegetation. ■The consequences of an excessive number of livestock grazing in an area are the reduction of the vegetation cover and the trampling and pulverization of the soil. ■This is usually followed by the drying of the soil and accelerated erosion. ■

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The sentence provided, "**This economic reliance on livestock in certain regions makes large tracts of land susceptible to overgrazing**," is best inserted at Square 2. The inserted sentence refers explicitly to relying on "livestock in certain regions." Those regions are the ones described in the sentence preceding square2, which states that raising livestock is "a major economic activity in semiarid lands." The inserted sentence then explains that this reliance "makes large tracts of land susceptible to overgrazing. " The sentence that follows square 2 goes on to say that "The consequences of an excessive number of livestock grazing in an area are. . ." Thus, the inserted sentence contains references to both the sentence before square 2 and the sentence after square 2. This is not true of any of the other possible insert points, so square 2 is correct.

13-14.○1, 3, 4

This is a Prose Summary question. It is completed correctly below. The correct choices are 1, 3, and 4. Choices 2, 5, and 6 are therefore incorrect.

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参考译文

沙漠的形成

沙漠已经占据了地球表面积约四分之一，而且最近几十年正以惊人的速度扩张。沙漠化是指类似沙漠的环境漫延到原本并非沙漠的区域。据估计，地球表面另外四分之一的地方正面临沙漠化威胁。

沙漠化主要通过以下过程实现：首先自然植被不断减少，随后风力和雨水加速了土壤的腐蚀。有的时候松散的土壤全部被风刮走，留下石质化的表层；其它情况下细小的沙粒可能会被吹走，而正常沙粒大小的砂子不断堆积，从而形成移动的沙丘或者沙脊。

即便是在保留了土壤表层的区域，植被减少也已成为土壤大量吸取地下水的能力下降的典型因素。雨水对松散土壤的冲击会把细小的粘土颗粒冲到土壤空隙中，封闭了土壤并降低土地表层水的渗透率。地表对水的吸收急剧减少，大量水资源流失，因此土壤的腐蚀率也随即增加。地表吸收水分的能力进一步弱化使得土壤越发干燥，导致植被的进一步流失，于是便形成了土壤沙漠化的恶性循环。

在一些地方，沙漠面积的扩大很大程度上归因于干燥的气候条件。在过去的几千年里，不断增加的温室效应使得一些地方干旱问题愈发严重。倘若空气污染带来的温室效应继续恶化，沙漠化进程会在未来数十年内加速实现。

然而，可以肯定的是，大部分地区沙漠化主要都是由于人类活动造成，而非自然条件导致。沙漠边缘的半干旱土地所处的生态平衡环境非常脆弱，环境压力持续增加，而这些半干旱区域适应环境压力的能力极其有限。人口数量的增加使得人们不断向土地施压，依其提供实物和燃料。在湿润的季节里，土地兴许能够应付这些压力。但是在干旱的季节里，在沙漠周边的土地上，存在着这样一个十分普遍的现象：人类对土地施加的压力远远超过了土地自身减压的能力，因此最终形成了沙漠。

导致沙漠化的主要因素有四个：过度种植，过度放牧，过分砍伐，过度灌溉。由于人口密度增加，人们对粮食作物的种植已经扩展到日益干燥的区域进行。这些区域很有可能经常会发生干旱，所以农作物种植失败是很正常的事情。种植大量农作物需要事先移除天然植被，而农作物欠收后又会留下大面积荒地，非常容易被风力和雨水侵蚀。

在半干旱地区，草坪是主要的天然植被，家畜饲养是当地的一项主要经济活动。在一个地区过量饲养家畜会导致植被覆盖面积减少，土地被大量践踏和碾碎。通常，随之而来的就是土地硬化和加速侵蚀。

在很多国家木材是用来做饭和加热的最主要燃料。人口增加带来的压力促使人们大量砍伐木材，导致许多城市和乡村周围大面积树木和灌木减少。同时人们大量使用烘干的动物排泄物作为替代燃料同样对土壤不利，因为这些珍贵的土壤成分调节剂和植物营养资源将不会再回归至土壤当

中。

造成土地沙漠化的最后一个主要人为因素在于人类过度灌溉导致土壤的盐碱化。灌溉多余的水渗透到地下水位。假如没有排水系统的存在，那么地下水位上升，把溶解的盐分带到土壤表面。水分蒸发后，盐分留在了表面，形成白色的地壳层，这一地壳层阻止了空气和水接触地底下的土壤。

沙漠化问题异常严重，这是因为有很广阔的地区和数量庞大的人群都受到了沙漠化的影响，而且要想逆转沙漠化的进程甚至减缓沙漠化的速度都面临着巨大的困难。一旦土壤被侵蚀，需要再经过几百到上千年的时间才会产生新的土壤。那些大量土壤仍保存完好的地方，亟需一个严谨而有力的保护政策和植被覆盖计划来保护现有土地。

EARLY CINEMA

The cinema did not emerge as a form of mass consumption until its technology evolved from the initial "peepshow" format to the point where images were projected on a screen in a darkened theater. In the peepshow format, a film was viewed through a small opening in a machine that was created for that purpose. Thomas Edison's peepshow device, the Kinetoscope, was introduced to the public in 1894. It was designed for use in Kinetoscope parlors, or arcades, which contained only a few individual machines and permitted only one customer to view a short, 50-foot film at any one time. The first Kinetoscope parlors contained five machines. For the price of 25 cents (or 5 cents per machine), customers moved from machine to machine to watch five different films (or, in the case of famous prizefights, successive rounds of a single fight).

These Kinetoscope arcades were modeled on phonograph parlors, which had proven successful for Edison several years earlier. In the phonograph parlors, customers listened to recordings through individual ear tubes, moving from one machine to the next to hear different recorded speeches or pieces of music. The Kinetoscope parlors functioned in a similar way. Edison was more interested in the sale of Kinetoscopes (for roughly $1,000 apiece) to these parlors than in the films that would be run in them (which cost approximately $10 to $15 each). He refused to develop projection technology, reasoning that if he made and sold projectors, then exhibitors would purchase only one machine-a projector-from him instead of

several.

Exhibitors, however, wanted to maximize their profits, which they could do more readily by projecting a handful of films to hundreds of customers at a time (rather than one at a time) and by charging 25 to 50 cents admission. About a year after the opening of the first Kinetoscope parlor in 1894, showmen such as Louis and Auguste Lumiere, Thomas Armat and Charles Francis Jenkins, and Orville and Woodville Latham (with the assistance of Edison's former assistant, William Dickson) perfected projection devices. These early projection devices were used in vaudeville theaters, legitimate theaters, local town halls, makeshift storefront theaters, fairgrounds, and amusement parks to show films to a mass audience.

With the advent of projection in 1895-1896, motion pictures became the ultimate form of mass consumption. Previously, large audiences had viewed spectacles at the theater, where vaudeville, popular dramas, musical and minstrel shows, classical plays, lectures, and slide-and-lantern shows had been presented to several hundred spectators at a time. But the movies differed significantly from these other forms of entertainment, which depended on either live performance or (in the case of the slide-and-lantern shows) the active involvement of a master of ceremonies who assembled the final program.

Although early exhibitors regularly accompanied movies with live acts, the substance of the movies themselves is mass-produced, prerecorded material that

can easily be reproduced by theaters with little or no active participation by the exhibitor. Even though early exhibitors shaped their film programs by mixing films and other entertainments together in whichever way they thought would be most attractive to audiences or by accompanying them with lectures, their creative control remained limited. What audiences came to see was the technological marvel of the movies; the lifelike reproduction of the commonplace motion of trains, of waves striking the shore, and of people walking in the street; and the magic made possible by trick photography and the manipulation of the camera.

With the advent of projection, the viewer's relationship with the image was no longer private, as it had been with earlier peepshow devices such as the Kinetoscope and the Mutoscope, which was a similar machine that reproduced motion by means of successive images on individual photographic cards instead of on strips of celluloid. It suddenly became public-an experience that the viewer shared with dozens, scores, and even hundreds of others. At the same time, the image that the spectator looked at expanded from the minuscule peepshow dimensions of 1 or 2 inches (in height) to the life-size proportions of 6 or 9 feet.

Paragraph 1: The cinema did not emerge as a form of mass consumption until its technology evolved from the initial "peepshow" format to the point where images were projected on a screen in a darkened theater. In the peepshow format, a film was viewed through a small opening in a machine that was created for that

purpose. Thomas Edison's peepshow device, the Kinetoscope, was introduced to the public in 1894. It was designed for use in Kinetoscope parlors, or arcades, which contained only a few individual machines and permitted only one customer to view a short, 50-foot film at any one time. The first Kinetoscope parlors contained five machines. For the price of 25 cents (or 5 cents per machine), customers moved from machine to machine to watch five different films (or, in the case of famous prizefights, successive rounds of a single fight).

1. According to paragraph 1, all of the following were true of viewing films in Kinetoscope parlors EXCEPT:

○One individual at a time viewed a film.

○Customers could view one film after another.

○Prizefights were the most popular subjects for films.

○Each film was short.

Paragraph 2: These Kinetoscope arcades were modeled on phonograph parlors, which had proven successful for Edison several years earlier. In the phonograph parlors, customers listened to recordings through individual ear tubes, moving from one machine to the next to hear different recorded speeches or pieces of music. The Kinetoscope parlors functioned in a similar way. Edison was more interested in the sale of Kinetoscopes (for roughly $1,000 apiece) to these parlors than in the films that would be run in them (which cost approximately $10 to $15 each). He refused to develop projection technology, reasoning that if he made and

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sold projectors, then exhibitors would purchase only one machine-a projector-from him instead of several.

2. The author discusses phonograph parlors in paragraph 2 in order to

○Explain Edison's financial success

○Describe the model used to design Kinetoscope parlors

○Contrast their popularity to that of Kinetoscope parlors

○Illustrate how much more technologically advanced Kinetoscope parlors were

3. Which of the sentences below best expresses the essential information in the highlighted sentence from the passage?

Incorrect answer choices change the meaning in important ways or leave out essential information.

○Edison was more interested in developing a variety of machines than in developing a technology based on only one.

○Edison refused to work on projection technology because he did not think exhibitors would replace their projectors with newer machines.

○Edison did not want to develop projection technology because it limited the number of machines he could sell.

○Edison would not develop projection technology unless exhibitors agreed to purchase more than one projector from him.

Paragraph 3: Exhibitors, however, wanted to maximize their profits, which they could do more readily by projecting a handful of films to hundreds of customers at a time (rather than one at a time) and by charging 25 to 50 cents admission. About a year after the opening of the first Kinetoscope parlor in 1894, showmen such as Louis and Auguste Lumiere, Thomas Armat and Charles Francis Jenkins, and Orville and Woodville Latham (with the assistance of Edison's former assistant, William Dickson) perfected projection devices. These early projection devices were used in vaudeville theaters, legitimate theaters, local town halls, makeshift storefront theaters, fairgrounds, and amusement parks to show films to a mass audience.

4. The word readily in the passage is closest in meaning to

○Frequently

○Easily

○Intelligently

○Obviously

5. The word assistance in the passage is closest in meaning to

○Criticism

○Leadership

○Help

○Approval

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Paragraph 4: With the advent of projection in 1895-1896, motion pictures became the ultimate form of mass consumption. Previously, large audiences had viewed spectacles at the theater, where vaudeville, popular dramas, musical and minstrel shows, classical plays, lectures, and slide-and-lantern shows had been presented to several hundred spectators at a time. But the movies differed significantly from these other forms of entertainment, which depended on either live performance or (in the case of the slide-and-lantern shows) the active involvement of a master of ceremonies who assembled the final program.

6. According to paragraph 4, how did the early movies differ from previous spectacles that were presented to large audiences?

○They were a more expensive form of entertainment.

○They were viewed by larger audiences.

○They were more educational.

○They did not require live entertainers.

Paragraph 5: Although early exhibitors regularly accompanied movies with live acts, the substance of the movies themselves is mass-produced, prerecorded material that can easily be reproduced by theaters with little or no active participation by the exhibitor. Even though early exhibitors shaped their film programs by mixing films and other entertainments together in whichever way they thought would be most attractive to audiences or by accompanying them with lectures* their creative control remained limited. What audiences came to see was

the technological marvel of the movies; the lifelike reproduction of the commonplace motion of trains, of waves striking the shore, and of people walking in the street; and the magic made possible by trick photography and the manipulation of the camera.

7. According to paragraph 5, what role did early exhibitors play in the presentation of movies in theaters?

○They decided how to combine various components of the film program.

○They advised film-makers on appropriate movie content.

○They often took part in the live-action performances.

○They produced and prerecorded the material that was shown in the theaters.

Paragraph 6: With the advent of projection, the viewer's relationship with the image was no longer private, as it had been with earlier peepshow devices such as the Kinetoscope and the Mutoscope, which was a similar machine that reproduced motion by means of successive images on individual photographic cards instead of on strips of celluloid. It suddenly became public-an experience that the viewer shared with dozens, scores, and even hundreds of others. At the same time, the image that the spectator looked at expanded from the minuscule peepshow dimensions of 1 or 2 inches (in height) to the life-size proportions of 6 or 9 feet.

8. Which of the following is mentioned in paragraph 6 as one of the ways the

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Mutoscope differed from the Kinetoscope?

○Sound and motion were simultaneously produced in the Mutoscope.

○More than one person could view the images at the same time with the Mutoscope.

○The Mutoscope was a less sophisticated earlier prototype of the Kinetoscope.

○A different type of material was used to produce the images used in the Mutocope.

9. The word it in the passage refers to

○The advent of projection

○The viewer's relationship with the image

○A similar machine

○Celluloid

10. According to paragraph 6, the images seen by viewers in the earlier peepshows, compared to the images projected on the screen, were relatively

○Small in size

○Inexpensive to create

○Unfocused

○Limited in subject matter

11. The word expanded in the passage is closest in meaning to

○Was enlarged

○Was improved

○Was varied

○Was rejected

Paragraph 3: ■Exhibitors, however, wanted to maximize their profits, which they could do more readily by projecting a handful of films to hundreds of customers at a time (rather than one at a time) and by charging 25 to 50 cents admission. ■About a year after the opening of the first Kinetoscope parlor in 1894, showmen such as Louis and Auguste Lumiere, Thomas Armat and Charles Francis Jenkins, and Orville and Woodville Latham (with the assistance of Edison's former assistant, William Dickson) perfected projection devices. ■These early projection devices were used in vaudeville theaters, legitimate theaters, local town halls, makeshift storefront theaters, fairgrounds, and amusement parks to show films to a mass audience.■

12. Look at the four squares [■] that indicate where the following sentence can be added to the passage.

When this widespread use of projection technology began to hurt his Kinetoscope business, Edison acquired a projector developed by Armat and introduced it as “Edison’s latest marvel, the Vitascope."

Where would the sentence best fit?

13. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some answer choices do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

The technology for modern cinema evolved at the end of the nineteenth century.

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-
-

Answer Choices

○Kinetoscope parlors for viewing films were modeled on phonograph parlors.

○Thomas Edison's design of the Kinetoscope inspired the development of large screen projection.

○Early cinema allowed individuals to use special machines to view films privately.

○Slide-and-lantern shows had been presented to audiences of hundreds of spectators.

○The development of projection technology made it possible to project images on a large screen.

○Once film images could be projected, the cinema became form of mass

consumption.

参考答案：

1. ○3

This is a Negative Factual Information question asking for specific information that can be found in paragraph l. Choice 3 is the correct answer. The paragraph does mention that one viewer at a time could view the films (choice 1), that films could be viewed one after another (choice 2), and that films were short (choice 4). Prizefights are mentioned as one subject of these short films, but not necessarily the most popular one.

2. ○2

This is a Rhetorical Purpose question. It asks why the author mentions "phonograph parlors" in paragraph 2. The correct answer is choice 2. The author is explaining why Edison designed his arcades like phonograph parlors; that design had been successful for him in the past. The paragraph does not mention the phonograph parlors to explain Edison's financial success, so choice 1 is incorrect. The paragraph does not directly discuss the situations described in choices 3 and 4, so those answers too are incorrect.

3. ○3

This is a Sentence Simplification question. As with all of these items, a single sentence in the passage is highlighted:

He refused to develop projection technology, reasoning that if he made and sold projectors, then exhibitors would purchase only one machine-a projector-from him, instead of several.

The correct answer is choice 3. That choice contains all of the essential ideas in the highlighted sentence. It is also the only choice that does not change the meaning of the sentence. Choice 1 says that Edison was more interested in developing a variety of machines, which is not true. Choice 2 says that the reason Edison refused to work on projection technology was that exhibitors would never replace the projectors. That also is not true; the highlighted sentence implies that he refused to do this because he wanted exhibitors to buy several Kinetoscope machines at a time instead of a single projector. Choice 4 says that Edison refused to develop projection technology unless exhibitors agreed to purchase more that one projector from him. The highlighted sentence actually says that Edison had already reasoned or concluded that exhibitors would not buy more than one, so choice 4 is a change in essential meaning.

4. ○2

This is a Vocabulary question. The word being tested is readily. It is highlighted in the passage. Readily means "easily," so choice 2 is the correct answer. The other choices do not fit in the context of the sentence.

5. ○3

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This is a Vocabulary question. The word being tested is assistance; it is highlighted in the passage. An assistant is a person who helps a leader, so choice 3, "help," is the correct answer.

6. ○4

This is a Factual Informal-ion question asking for specific information that can be found in paragraph 4. The correct answer is choice 4. Early movies were different from previous spectacles because they did not require live actors. The paragraph states (emphasis added):

"But the movies differed significantly from these other forms of entertainment, which depended on either ***live performance*** *or (in the case of the slide-and-lantern shows) the active involvement of a master of ceremonies who assembled the final program."*

So the fact that previous spectacles depended on live performances is explicitly stated as one of the ways (but not the only way) that those earlier entertainments differed from movies. The other answer choices are not mentioned in the paragraph.

7. ○1

This is a Factual Information question asking for specific information that can be found in paragraph 5. The correct answer is choice 1, "They decided how to combine various components of the film program," because that idea is stated explicitly in the paragraph:

"Early exhibitors shaped their film programs by mixing films and other entertainments together."

The other choices, while possibly true, are not explicitly mentioned in the paragraph as being among the exhibitors' roles.

8. ○4

This is a Factual Information question asking for specific information that can be found in paragraph 6. The correct answer is choice 4, "A different type of material was used to produce the images used in the Mutoscope." The paragraph says that these machines were very similar but that they differed in one particular way:

". . . the Mutoscope, which was a similar machine that reproduced motion by means of successive images on individual photographic cards instead of on strips of celluloid."

9. ○2

This is a Reference question. The word being tested is it. That word is highlighted in the passage. Choice 2, "the viewer's relationship with the image," is the correct answer. This is a simple-pronoun referent item. The sentence says that "it" suddenly became "public," which implies that whatever "it" is, it was formerly private. The paragraph says that the "viewer's relationship to the image was no longer private," so that relationship is the "it" referred to here.

10. ○1

This is a Factual Information question asking for specific information that can be found in paragraph 6. The correct answer is choice 1. The paragraph says that the images expanded from an inch or two to life-size proportions, so "small in size" must be correct. The paragraph does not mention the other choices.

11. ○1

This is a Vocabulary Question. The word being tested is expanded. It is highlighted in the passage. Choice 1, "was enlarged," is the correct answer. If something expanded, it grew or got bigger. "Enlarged" also means "grew or got bigger."

12. ○4

This is an Insert Text question. You can see the four black squares in paragraph 3 that represent the possible answer choices here.

■ Exhibitors, however, wanted to maximize their profits, which they could do more readily by projecting a handful of films to hundreds of customers at a time (rather than one at a time) and by charging 25 to 50 cents admission. ■ About a year after the opening of the first Kinetoscope parlor in 1894, showmen such as Louis and Auguste Lumiere, Thomas Armat and Charles Francis Jenkins, and Orville and Woodville Latham (with the assistance of Edison's former assistant, William Dickson) perfected projection devices. ■These early projection devices were used in vaudeville theaters, legitimate theaters, local

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town halls, makeshift storefront theaters, fairgrounds, and amusement parks to show films to a mass audience. ■

The inserted sentence fits best at square 4 because it represents the final result of the general use of projectors. After projectors became popular, Edison lost money, and although he had previously refused to develop projection technology, now be was forced to do so. To place the sentence anyplace else would interrupt the logical narrative sequence of the events described. None of the sentences in this paragraph can logically follow the inserted sentence, so squares 1, 2, and 3 are all incorrect.

13.○3, 5, 6

This is a Prose Summary question. It is completed correctly below. The correct choices are 3, 5, and 6. Choices 1, 2, and 4 are therefore incorrect.

参考译文

早期影院

电影院的播放技术从最初的西洋镜形式演变为将影像投影到幽暗的影院屏幕，这一转变使得电影院大众化消费成为可能。在通过西洋镜播放电影的年代里，人们只能通过播放仪器的一个专门设置的小窗口来看电影。到了 1894 年，托马斯·爱迪生发明的活动电影放映机公布于众，这种放映机仅适用于活动电影放映室或电影娱乐城。它里面仅包含少量的独立播放器，每次仅允许一个顾客观看一部 50 张胶卷的小短片。第一个电影放映厅的放映机中有五台播放器。价格是 25 美分/次，（每台播放器观看价格是 5 美分）。观众们从一个播放器换到下一个播放器依次观看不同的影片（就像有名的职业拳击赛，每场都要连续进行好几轮比赛）。

这些电影播放厅是仿照留声机播放厅设计的，这也证明了爱迪生前几年的设计非常成功。在留声机播放厅中，顾客们通过独立的耳管听取已经录制好的声音，从一台机器换到另一台听取不同演讲或音乐的录音。电影放映室的功能与之类似。相比之下，爱迪生对这些电影放映机（每台一千美元）的销售更感兴趣，而不是那些需要放映的电影（每部 10-15 美元）。他不愿研究投影技术，因为他认为如果研发并且销售投影机，电影放映者就只会买一台投影机而不是几台。

然而，电影放映者们期望将自己的收益最大化，他们希望能更简易地将少量电影同时放映给几百个顾客（而不是每次为一个顾客播放一次电

影），每次收费 25 到 50 美分。在 1894 年电影放映机公布的一年之后，摄影师如 Louis 和 Auguste Lumiere，Thomas Armat 和 Charles Francis Jenkins，Orville 和 Woodville Latham 以及爱迪生先前的助手 William Dickson 将投影设备变得更加完善。这些早期的投影机在众多场合为大众观众播放电影，如：杂技剧团、正当的影院、当地镇上的礼堂、临时的影院店面、露天游乐场和游乐园等。

随着 1895-1896 年间投影机的到来，电影成为了大众消费的最终形式。在此之前，一群观众坐在剧场里观看表演，在那里几百个观众可以同时观看轻歌舞剧、流行戏剧、音乐剧、歌唱表演、古典演奏、演讲和胶片演示等。电影与这些娱乐形式明显的不同点是，电影无需依赖现场表演，也不需要串联全场节目的主持人的积极参与（例如胶片演示）。

尽管早期的电影放映者通常在电影放映时伴有现场表演，但是电影本身的内容是影院事先大量录制下来的，这些材料能在没有表演者或者表演者较少参与的情况在电影院中轻松地再现。即便这样，早期的电影放映者还是将电影和其它娱乐节目或者演讲结合在一起，他们认为用这样的方法能最大限度的吸引观众，他们管理的创造力还是非常有限的。观众们在这里可以看到的电影技术的进步；生活琐事的重现，如火车的运动，海浪拍击海岸，人们在街上行走等；以及由摄影特技和相机操控做出来的特效。

伴随投影机的到来，电影不在属于个别人的消费品。就像之前西洋镜时代的播放设备，如活动电影播放机和早期电影播放机，早期电影播放机

播放的都是一系列独立的图像而不是胶片，把单个摄影卡上的图片串联起来形成影像。投影技术使得电影变得更加大众化了，观众能够和十二个、二十个、甚至是上百个人共同观看一部电影。与此同时，观众所看到的图像大小也从狭小的 1 英寸或 2 英寸西洋镜高度扩展到与实物状的 6 英尺或 9 英尺。

AGGRESSION

When one animal attacks another, it engages in the most obvious example of aggressive behavior. Psychologists have adopted several approaches to understanding aggressive behavior in people.

The Biological Approach. Numerous biological structures and chemicals appear to be involved in aggression. One is the hypothalamus, a region of the brain. In response to certain stimuli, many animals show instinctive aggressive reactions. The hypothalamus appears to be involved in this inborn reaction pattern: electrical stimulation of part of the hypothalamus triggers stereotypical aggressive behaviors in many animals. In people, however, whose brains are more complex, other brain structures apparently moderate possible instincts.

An offshoot of the biological approach called sociobiology suggests that aggression is natural and even desirable for people. Sociobiology views much social behavior, including aggressive behavior, as genetically determined. Consider Darwin's theory of evolution. Darwin held that many more individuals are produced than can find food and survive into adulthood. A struggle for survival follows. Those individuals who possess characteristics that provide them with an advantage in the struggle for existence are more likely to survive and contribute their genes to the next generation. In many species, such characteristics include aggressiveness. Because aggressive individuals are more likely to survive and

reproduce, whatever genes are linked to aggressive behavior are more likely to be transmitted to subsequent generations.

The sociobiology view has been attacked on numerous grounds. One is that people's capacity to outwit other species, not their aggressiveness, appears to be the dominant factor in human survival. Another is that there is too much variation among people to believe that they are dominated by, or at the mercy of, aggressive impulses.

The Psychodynamic Approach. Theorists adopting the psychodynamic approach hold that inner conflicts are crucial for understanding human behavior, including aggression. Sigmund Freud, for example, believed that aggressive impulses are inevitable reactions to the frustrations of daily life. Children normally desire to vent aggressive impulses on other people, including their parents, because even the most attentive parents cannot gratify all of their demands immediately. Yet children, also fearing their parents' punishment and the loss of parental love, come to repress most aggressive impulses. The Freudian perspective, in a sense: sees us as "steam engines." By holding in rather than venting "steam," we set the stage for future explosions. Pent-up aggressive impulses demand outlets. They may be expressed toward parents in indirect ways such as destroying furniture, or they may be expressed toward strangers later in life.

According to psychodynamic theory, the best ways to prevent harmful

aggression may be to encourage less harmful aggression. In the steam-engine analogy, verbal aggression may vent some of the aggressive steam. So might cheering on one's favorite sports team. Psychoanalysts, therapists adopting a psychodynamic approach, refer to the venting of aggressive impulses as "catharsis." Catharsis is theorized to be a safety valve. But research findings on the usefulness of catharsis are mixed. Some studies suggest that catharsis leads to reductions in tension and a lowered likelihood of future aggression. Other studies, however, suggest that letting some steam escape actually encourages more aggression later on.

The Cognitive Approach. Cognitive psychologists assert that our behavior is influenced by our values, by the ways in which we interpret our situations and by choice. For example, people who believe that aggression is necessary and justified-as during wartime-are likely to act aggressively, whereas people who believe that a particular war or act of aggression is unjust, or who think that aggression is never justified, are less likely to behave aggressively.

One cognitive theory suggests that aggravating and painful events trigger unpleasant feelings. These feelings, in turn, can lead to aggressive action, but not automatically. Cognitive factors intervene. People decide whether they will act aggressively or not on the basis of factors such as their experiences with aggression and their interpretation of other people's motives. Supporting evidence comes from research showing that aggressive people often distort other people's motives.

For example, they assume that other people mean them harm when they do not.

Catharsis: In psychodynamic theory, the purging of strong emotions or the relieving of tensions.

Paragraph 2: **The Biological Approach.** Numerous biological structures and chemicals appear to be involved in aggression. One is the hypothalamus, a region of the brain. In response to certain stimuli, many animals show instinctive aggressive reactions. The hypothalamus appears to be involved in this inborn reaction pattern: electrical stimulation of part of the hypothalamus triggers stereotypical aggressive behaviors in many animals. In people, however, whose brains are more complex, other brain structures apparently moderate possible instincts.

1. According to paragraph 2, what evidence indicates that aggression in animals is related to the hypothalamus?

○Some aggressive animal species have a highly developed hypothalamus.

○Artificial stimulation of the hypothalamus results in aggression in animals.

○Animals behaving aggressively show increased activity in the hypothalamus.

○Animals who lack a hypothalamus display few aggressive tendencies.

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Paragraph 3: An offshoot of the biological approach called sociobiology suggests that aggression is natural and even desirable for people. Sociobiology views much social behavior, including aggressive behavior, as genetically determined. Consider Darwin's theory of evolution. Darwin held that many more individuals are produced than can find food and survive into adulthood. A struggle for survival follows. Those individuals who possess characteristics that provide them with an advantage in the struggle for existence are more likely to survive and contribute their genes to the next generation. In many species, such characteristics include aggressiveness. Because aggressive individuals are more likely to survive and reproduce, whatever genes are linked to aggressive behavior are more likely to be transmitted to subsequent generations.

2. According to Darwin's theory of evolution, members of a species are forced to struggle for survival because

○Not all individuals are skilled in finding food

○Individuals try to defend their young against attackers

○Many more individuals are born than can survive until the age of reproduction

○Individuals with certain genes are more likely to reach adulthood

Paragraph 5: **The Psychodynamic Approach.** Theorists adopting the psychodynamic approach hold that inner conflicts are crucial for understanding

human behavior, including aggression. Sigmund Freud, for example, believed that aggressive impulses are inevitable reactions to the frustrations of daily life. Children normally desire to vent aggressive impulses on other people, including their parents, because even the most attentive parents cannot gratify all of their demands immediately. Yet children, also fearing their parents' punishment and the loss of parental love, come to repress most aggressive impulses. The Freudian perspective, in a sense: sees us as "steam engines." By holding in rather than venting "steam," we set the stage for future explosions. Pent-up aggressive impulses demand outlets. They may be expressed toward parents in indirect ways such as destroying furniture, or they may be expressed toward strangers later in life.

3. The word inevitable in the passage is closest in meaning to

○Unavoidable

○Regrettable

○Controllable

○Unsuitable

4. The word gratify in the passage is closest in meaning to

○Identify

○Modify

○Satisfy

○Simplify

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5. The word they in the passage refers to

○Future explosions

○Pent-up aggressive impulses

○Outlets

○Indirect ways

6. According to paragraph 5, Freud believed that children experience conflict between a desire to vent aggression on their parents and

○A frustration that their parents do not give them everything they want

○A fear that their parents will punish them and stop loving them

○A desire to take care of their parents

○A desire to vent aggression on other family members

7. Freud describes people as steam engines in order to make the point that people

○Deliberately build up their aggression to make themselves stronger

○Usually release aggression in explosive ways

○Must vent their aggression to prevent it from building up

○Typically lose their aggression if they do not express it

Paragraph 7: The Cognitive Approach. Cognitive psychologists assert that our behavior is influenced by our values, by the ways in which we interpret our

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situations and by choice. For example, people who believe that aggression is necessary and justified-as during wartime-are likely to act aggressively, whereas people who believe that a particular war or act of aggression is unjust, or who think that aggression is never justified, are less likely to behave aggressively.

Paragraph 8: One cognitive theory suggests that aggravating and painful events trigger unpleasant feelings. These feelings, in turn, can lead to aggressive action, but not automatically. Cognitive factors intervene. People decide whether they will act aggressively or not on the basis of factors such as their experiences with aggression and their interpretation of other people's motives. Supporting evidence comes from research showing that aggressive people often distort other people's motives. For example, they assume that other people mean them harm when they do not.

8. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage?

Incorrect answer choices change the meaning in important ways or leave out essential information.

○People who believe that they are fighting a just war act aggressively while those who believe that they are fighting an unjust war do not.

○People who believe that aggression is necessary and justified are more likely to act aggressively than those who believe differently.

○People who normally do not believe that aggression is necessary and

justified may act aggressively during wartime.

○People who believe that aggression is necessary and justified do not necessarily act aggressively during wartime.

9. According to the cognitive approach described in paragraphs 7 and 8, all of the following may influence the decision whether to act aggressively EXCEPT a person's

○Moral values

○Previous experiences with aggression

○Instinct to avoid aggression

○Beliefs about other people's intentions

10. The word distort in the passage is closest in meaning to

○Mistrust

○Misinterpret

○Criticize

○Resent

Paragraph 5: **The Psychodynamic Approach.** Theorists adopting the psychodynamic approach hold that inner conflicts are crucial for understanding human behavior, including aggression. Sigmund Freud, for example, believed that aggressive impulses are inevitable reactions to the frustrations of daily life. Children normally desire to vent aggressive impulses on other people, including

their parents, because even the most attentive parents cannot gratify all of their demands immediately. ■Yet children, also fearing their parents' punishment and the loss of parental love, come to repress most aggressive impulses. ■The Freudian perspective, in a sense: sees us as "steam engines." ■By holding in rather than venting "steam," we set the stage for future explosions. ■Pent-up aggressive impulses demand outlets. They may be expressed toward parents in indirect ways such as destroying furniture, or they may be expressed toward strangers later in life.

11. Look at the four squares [■] that indicate where the following sentence can be added to the passage.

According to Freud, however, impulses that have been repressed continue to exist and demand expression.

Where would the sentence best fit?

12. Directions: Complete the table below by matching five of the six answer choices with the approach to aggression that they exemplify. *This question is worth 3 points.*

Approach to Understanding Aggression Associated Claims

Biological approach

●

Psychodynamic approach

-
-

Cognitive approach

-
-

Answer choices

○Aggressive impulses toward people are sometimes expressed in indirect ways.

○Aggressiveness is often useful for individuals in the struggle for survival.

○Aggressive behavior may involve a misunderstanding of other people's intentions.

○The need to express aggressive impulses declines with age.

○Acting aggressively is the result of a choice influenced by a person's values and beliefs.

○Repressing aggressive impulses can result in aggressive behavior.

参考答案:

1. ○ 3

This is a Factual Information question asking for specific information that can be found in paragraph 2. The correct answer is choice 3. The question asks specifically for "evidence that indicates that aggression in animals is related to the hypothalamus." Answer choices 1 and 2 are contradicted by the paragraph. Choice 2 is incorrect because, while the paragraph states that "electrical stimulation" triggers aggressive behavior in many animals, this is not "evidence" in itself, but merely support for the more general statement in choice 3 that increased hypothalamus activity, in general, is related to aggression.

以上内容为 OG 给出的解释，但本人认为此题无正确选项。因为 C 选项中的 increased activity 为原文未提及内容，因此 C 项不正确。
B 选项中 artificial 错误，因为我们不能从原文当中的电刺激海马体导致动物侵略性推出人工的刺激海马体能导致动物侵略性，这个是一个以偏概全的结论，因此建议将 B 选项中的 artificial 改为 electrical，则 B 选项为正确选项。

2. ○3

This is a Factual Information question asking for specific information that can be found in the passage. The correct answer is choice 3, "many more individuals are born than can survive until the age of reproduction." This

answer choice is essentially a paraphrase of paragraph 3, sentence 4: "Darwin held that many more individuals are produced than can find food and survive into adulthood." Choices 1 and 2 are not mentioned at all. Choice 4 may be true, but it is not stated in the passage as a fact; an inference is needed to support it.

3. ○1

This is a Vocabulary question. The word being tested is inevitable. It is highlighted in the passage. The correct answer is choice 1, unavoidable. If something is inevitable, that means that it will occur no matter what; in other words, it is unavoidable.

4. ○3

This is a Vocabulary question. The word being tested is gratify. It is highlighted in the passage. The correct answer is choice 3, "satisfy." If a person's desires are gratified, those desires are fulfilled. Thus the person is satisfied.

5. ○2

This is a Reference question. The word being tested is they. It is highlighted in the passage. The correct answer is choice 2, "pent-up aggressive impulses." This is a simple pronoun-referent item. The word the?) here refers to something that "may be expressed toward strangers later in life." This is the "outlet" toward which the "aggressive impulses" mentioned may be directed.

6. ○2

This is a Factual Information question asking for specific information that can be found in paragraph 5. The correct answer is choice 2, "a fear that their parents will punish them and stop loving them." The question asks what causes the conflict between the desire to vent aggression and children's fears. The answer is found in paragraph 5 in the sentence that reads, "Yet children, also fearing their parents' punishment and the loss of parental love, come to repress most aggressive impulses." Answer choice 2 is the only choice that correctly identifies the cause of the conflict created by repressing aggression in children.

7. ○3

This is a Rhetorical Purpose question. If asks you why the author mentions that Freud described people as "steam engines" in the passage. The phrase being tested is highlighted in the passage. The correct answer is choice 3, "must vent their aggression to prevent it from building up." Steam engines will explode if their steam builds up The same is true of people, as choice 3 indicates. The other choices are not necessarily true of both people and steam engines, so they are incorrect.

8. ○2

This is a Sentence Simplification question. As with all of these items, a single sentence in the passage is highlighted:

For example, people who believe that aggression is necessary and justified-as during wartime-are likely to act aggressively, whereas people who believe that a particular war or act of aggression is unjust, or who think that aggression is never justified, are less likely to behave aggressively.

The correct answer is choice 2. It contains all of the *essential* information in the highlighted sentence. The highlighted sentence compares people who believe particular acts of aggression are necessary and those who don't, in terms of their relative likelihood to act aggressively under certain conditions. This is precisely what choice 2 says: "People who believe that aggression is necessary and justified are more likely to act aggressively than those who believe differently." It compares the behavior of one type of person to that of another type of person. Nothing essential has been left out, and the meaning has not been changed. Choice 1 changes the meaning of the sentence; it says categorically that "those (people) who believe that they are fighting an unjust war do not (act aggressively)." The highlighted sentence merely says that such people are "less likely" to act aggressively, not that they never will; this changes the meaning. Choice 3 says, "People who normally do not believe that aggression is necessary and justified may act aggressively during wartime." This is incorrect because it leaves out critical information: it does not mention people who do believe aggression is necessary. This choice does not make the same comparison as the highlighted sentence. Choice 4, "People who believe that aggression is necessary and justified do not necessarily act aggressively

during wartime," also changes the meaning of the sentence by leaving out essential information. In this choice, no mention is made of people who do not believe aggression is necessary. This choice does not make the same comparison as the highlighted sentence.

9. ○3

This is a Negative Factual Information question asking for specific information that can be found in paragraphs 7 and 8. Choice 3 is the correct answer. Choice 1, "moral values," is explicitly mentioned as one of the influences on aggressive behavior; so it is incorrect. Choices 2 (“previous experiences”) and 4 sentence in paragraph8 says, “People *decide* whether they will act aggressively of not on the basis of factors such as their experiences with aggression and their interpretation of other people’s motives.” Choice 3, the “instinct to avoid aggression,” is not mentioned, so it is the correct answer here.

10. ○2

This is a Vocabulary question. The word being tested is *distort* . It is highlighted in the passage. The correct answer is choice 2, "misinterpret." To distort other people's motives is to twist them, or view them incorrectly and thereby not understand them properly. Something that is not understood properly is misinterpreted.

11. ○2

This is an Insert Text question. You can see the four black squares in paragraph 5 that represent the possible answer choices here.

The Psychodynamic Approach. *Theorists adopting the psychodynamic approach hold that inner conflicts are crucial for understanding human behavior, including aggression. Sigmund Freud, for example, believed that aggressive impulses are inevitable reactions to the frustrations of daily life. Children normally desire to vent aggressive impulses on other people, including their parents, because even the most attentive parents cannot gratify all of their demands immediately.* ■*Yet children, also fearing their parents' punishment and the loss of parental love, come to repress most aggressive impulses.* ■*The Freudian perspective, in a sense, sees us as "steam engines."* ■ *By holding in rather than venting "steam," we set the stage for future explosions.* ■ *Pent-up aggressive impulses demand outlets. They may be expressed toward parents in indirect ways such as destroying furniture, or they may be expressed toward strangers later in life.*

The sentence provided, "**According to Freud, however, impulses that have been repressed continue to exist and demand expression**," is best inserted at square 2. Square 2 is correct because the sentence being inserted is a connective sentence, connecting the idea of childhood repression in the preceding sentence to the "Freudian perspective" in the sentence that follows. The use of the word however in this sentence indicates that an idea already introduced (the repression of children's aggressive impulses) is being

modified. Here, the inserted sentence tells us that Freud thought that even though these impulses are repressed, they continue to exist. This serves as a connection to the next sentence and the "Freudian perspective." Inserting the sentence at square 1 would place the modification ("however, impulses . . . continue to exist") before the idea that it modifies (repression of impulses). This makes no logical sense. Inserting the sentence at square 3 would move the modifying sentence away from its logical position immediately following the idea that it modifies (repression of impulses). Placing the insert sentence at square 4 moves the sentence farther from its logical antecedent and has no connection to the sentence that follows it.

12.○2

○1, 6

○3, 5

参考译文

侵略性行为

动物攻击异己时，会表现出非常明显的侵略性行为。心理学家们采用了数种方法来分析人类的侵略性行为。

生物学方法。侵略性行为似乎与许多生物结构和化学物质有关。如大脑中的下丘脑。很多动物在受到特定刺激时会表现出本能的侵略反应。下丘脑似乎与动物的这种本能反应有关：对许多动物的下丘脑中部分区域进行电激，会引发一些它们的常见侵略性行为。然而，人类的大脑要复杂的多，大脑的其他结构似乎可以抑制这种本性。

社会生物学是生物学方法的一个分支，该理论认为侵略性对于人类而言是天生并且必要的。社会生物学认为，包括侵略性行为在内的许多社会行为都是由遗传决定的。根据达尔文的进化论，他认为，个体存在的数量远远超过那些可以找到食物并且活到成年的个体数量，个体之间开始进行生存竞争，那些拥有竞争优势的个体更容易存活，并且会将它们有利于生存竞争的基因遗传给下一代。大部分物种所具有的竞争优势特质之一就是好斗性。拥有侵略性特质的个体更容易存活和繁殖，因此，与侵略性行为相关的各种基因遗传给下一代的可能性更大。

该理论在众多方面遭到质疑。其一，人类拥有其他物种不具备的能力，这种并非侵略性质的能力才是人类生存下来的主要原因。其二，人类身上

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存在太多的变数，因此，我们无法相信人类会被侵略性冲动主导或者支配。

精神动力学方法。理论家们依据精神动力学方法认为，内在矛盾是理解人类包括侵略性行为在内的所有行为的关键所在。比如，弗洛伊德认为，日常生活中的挫败感不可避免地导致人类产生侵略性冲动。孩子们时常想对包括他们父母在内的其他人发泄侵略性冲动的情感，因为即使是最周全的父母也无法做到立即满足孩子的所有要求。然而，孩们又会因为害怕受到父母的处罚，担心失去父母的爱而压制了内心大部分的侵略性冲动。从某种意义上说，弗洛伊德的观点是将人类视为“蒸汽机”，通过内部压制而不是释放“蒸汽”，进而为今后的爆发埋下伏笔。积聚起来的的侵略性冲动需要被释放出来。孩子们会间接对他们的父母发泄，比如毁坏家具，或在以后的生活中对陌生人发泄。

根据精神动力学理论可知，避免有害侵略的最好方法是提倡危害较小的侵略方式。用蒸汽机打个比方吧，言语性的侵略可以释放些许带有侵略性质的蒸汽。比如，你可以为自己最喜欢的体育团队呐喊助威。精神分析学家是利用精神动力学方法分析的理疗师，他们将侵略性冲动的发泄看成是“精神发泄”。理论证明精神发泄是一种安全的方式。但研究发现精神发泄的有用性和无用性很混乱。有的研究表明精神发泄可以缓解紧张情绪并且有助于降低以后侵略性行为产生的可能性。但其他研究又表明让释放部分的侵略性冲动蒸汽事实上会导致今后更多的侵略性行为的产生。

认知方法。认知心理学家们认为人类的行为受以下因素影响：价值观、

解析自己处境的方式以及不同的选择。例如，那些认为侵略性行为是必要的，并且认为战争时期侵略行为是正义的人，他们的好斗性可能更高，而认为某些战争或侵略行为是不公平的，并且认为侵略永远是不正当的人，他们遇事时不大可能会采取侵略性行为。

另一认知理论认为，恼人的、痛苦的事件会引起人们的不悦。随即，这种不悦将导致但并非自动地导致侵略性行为，人们的认知因素会在其中起到干预作用。一个人是否采取出侵略性行动取决于以下因素，他们进行侵略性攻击的经历，对他人动机的解读等。研究表明带有侵略性的人经常曲解他人的意图。例如，他们认为别人想伤害自己，而事实并非如此。

ARTISANS AND INDUSTRIALIZATION

Before 1815 manufacturing in the United States had been done in homes or shops by skilled artisans. As master craft workers, they imparted the knowledge of their trades to apprentices and journeymen. In addition, women often worked in their homes part-time, making finished articles from raw material supplied by merchant capitalists. After 1815 this older form of manufacturing began to give way to factories with machinery tended by unskilled or semiskilled laborers. Cheap transportation networks, the rise of cities, and the availability of capital and credit all stimulated the shift to factory production.

The creation of a labor force that was accustomed to working in factories did not occur easily. Before the rise of the factory, artisans had worked within the home. Apprentices were considered part of the family, and masters were responsible not only for teaching their apprentices a trade but also for providing them some education and for supervising their moral behavior. Journeymen knew that if they perfected their skill, they could become respected master artisans with their own shops. Also, skilled artisans did not work by the clock, at a steady pace, but rather in bursts of intense labor alternating with more leisurely time.

The factory changed that. Goods produced by factories were not as finished or elegant as those done by hand, and pride in craftsmanship gave way to the pressure to increase rates of productivity. The new methods of doing business

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involved a new and stricter sense of time. Factory life necessitated a more regimented schedule, where work began at the sound of a bell and workers kept machines going at a constant pace. At the same time, workers were required to discard old habits, for industrialism demanded a worker who was alert, dependable, and self-disciplined. Absenteeism and lateness hurt productivity and, since work was specialized, disrupted the regular factory routine. Industrialization not only produced a fundamental change in the way work was organized; it transformed the very nature of work.

The first generation to experience these changes did not adopt the new attitudes easily. The factory clock became the symbol of the new work rules. One mill worker who finally quit complained revealingly about "obedience to the ding-dong of the bell-just as though we are so many living machines." With the loss of personal freedom also came the loss of standing in the community. Unlike artisan workshops in which apprentices worked closely with the masters supervising them, factories sharply separated workers from management. Few workers rose through the ranks to supervisory positions, and even fewer could achieve the artisan's dream of setting up one's own business. Even well-paid workers sensed their decline in status.

In this newly emerging economic order, workers sometimes organized to protect their rights and traditional ways of life. Craft workers such as carpenters, printers, and tailors formed unions, and in 1834 individual unions came together

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in the National Trades' Union. The labor movement gathered some momentum in the decade before the Panic of 1837, but in the depression that followed, labor's strength collapsed. During hard times, few workers were willing to strike* or engage in collective action. And skilled craft workers, who spearheaded the union movement, did not feel a particularly strong bond with semiskilled factory workers and unskilled laborers. More than a decade of agitation did finally bring a workday shortened to 10 hours to most industries by the 1850's, and the courts also recognized workers' right to strike, but these gains had little immediate impact.

Workers were united in resenting the industrial system and their loss of status, but they were divided by ethnic and racial antagonisms, gender, conflicting religious perspectives, occupational differences, political party loyalties, and disagreements over tactics. For them, the factory and industrialism were not agents of opportunity but reminders of their loss of independence and a measure of control over their lives. As United States society became more specialized and differentiated, greater extremes of wealth began to appear. And as the new markets created fortunes for the few, the factory system lowered the wages of workers by dividing labor into smaller, less skilled tasks.

Paragraph 1: Before 1815 manufacturing in the United States had been done in homes or shops by skilled artisans. As master craft workers, they imparted the knowledge of their trades to apprentices and journeymen. In addition, women

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often worked in their homes part-time, making finished articles from raw material supplied by merchant capitalists. After 1815 this older form of manufacturing began to give way to factories with machinery tended by unskilled or semiskilled laborers. Cheap transportation networks, the rise of cities, and the availability of capital and credit all stimulated the shift to factory production.

1. Which of the following can be inferred from the passage about articles manufactured before 1815?

○They were primarily produced by women.

○They were generally produced in shops rather than in homes.

○They were produced with more concern for quality than for speed of production.

○They were produced mostly in large cities with extensive transportation networks.

Paragraph 2: The creation of a labor force that was accustomed to working in factories did not occur easily. Before the rise of the factory, artisans had worked within the home. Apprentices were considered part of the family, and masters were responsible not only for teaching their apprentices a trade but also for providing them some education and for supervising their moral behavior. Journeymen knew that if they perfected their skill, they could become respected master artisans with their own shops. Also, skilled artisans did not work by the clock, at a steady pace, but rather in bursts of intense labor alternating with more

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leisurely time.

2. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage?

Incorrect answer choices change the meaning in important ways or leave out essential information.

○Masters demanded moral behavior from apprentices but often treated them irresponsibly.

○The responsibilities of the master to the apprentice went beyond the teaching of a trade.

○Masters preferred to maintain the trade within the family by supervising and educating the younger family members.

○Masters who trained members of their own family as apprentices demanded excellence from them.

Paragraph 3: The factory changed that. Goods produced by factories were not as finished or elegant as those done by hand, and pride in craftsmanship gave way to the pressure to increase rates of productivity. The new methods of doing business involved a new and stricter sense of time. Factory life necessitated a more regimented schedule, where work began at the sound of a bell and workers kept machines going at a constant pace. At the same time, workers were required to discard old habits, for industrialism demanded a worker who was alert, dependable, and self-disciplined. Absenteeism and lateness hurt productivity and,

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since work was specialized, disrupted the regular factory routine. Industrialization not only produced a fundamental change in the way work was organized; it transformed the very nature of work.

3. The word disrupted in the passage is closest in meaning to

○Prolonged

○Established

○Followed

○Upset

Paragraph 4: The first generation to experience these changes did not adopt the new attitudes easily. The factory clock became the symbol of the new work rules. One mill worker who finally quit complained revealingly about "obedience to the ding-dong of the bell-just as though we are so many living machines." With the loss of personal freedom also came the loss of standing in the community. Unlike artisan workshops in which apprentices worked closely with the masters supervising them, factories sharply separated workers from management. Few workers rose through the ranks to supervisory positions, and even fewer could achieve the artisan's dream of setting up one's own business. Even well-paid workers sensed their decline in status.

4. In paragraph 4, the author includes the quotation from a mill worker in order to

○Support the idea that it was difficult for workers to adjust to working in factories

○To show that workers sometimes quit because of the loud noise made by factory machinery

○Argue that clocks did not have a useful function in factories

○Emphasize that factories were most successful when workers revealed their complaints

5. All of the following are mentioned in paragraph 4 as consequences of the new system for workers EXCEPT a loss of

○Freedom

○Status in the community

○Opportunities for advancement

○Contact among workers who were not managers

Paragraph 5: In this newly emerging economic order, workers sometimes organized to protect their rights and traditional ways of life. Craft workers such as carpenters, printers, and tailors formed unions, and in 1834 individual unions came together in the National Trades' Union. The labor movement gathered some momentum in the decade before the Panic of 1837, but in the depression that followed, labor's strength collapsed. During hard times, few workers were willing to *strike** or engage in collective action. And skilled craft workers, who spearheaded the union movement, did not feel a particularly strong bond with

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semiskilled factory workers and unskilled laborers. More than a decade of agitation did finally bring a workday shortened to 10 hours to most industries by the 1850's, and the courts also recognized workers' right to strike, but these gains had little immediate impact.

6. The phrase gathered some momentum in the passage is closest in meaning to

○Made progress

○Became active

○Caused changes

○Combined forces

7. The word spearheaded in the passage is closest in meaning to

○Led

○Accepted

○Changed

○Resisted

8. Which of the following statements about the labor movement of the 1800's is supported by paragraph 5?

○It was most successful during times of economic crisis.

○Its primary purpose was to benefit unskilled laborers.

○It was slow to improve conditions for workers.

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○It helped workers of all skill levels form a strong bond with each other.

Paragraph 6: Workers were united in resenting the industrial system and their loss of status, but they were divided by ethnic and racial antagonisms, gender, conflicting religious perspectives, occupational differences, political party loyalties, and disagreements over tactics. For them, the factory and industrialism were not agents of opportunity but reminders of their loss of independence and a measure of control over their lives. As United States society became more specialized and differentiated, greater extremes of wealth began to appear. And as the new markets created fortunes for the few, the factory system lowered the wages of workers by dividing labor into smaller, less skilled tasks.

9. The author identifies political party loyalties, and disagreements over tactics as two of several factors that

○Encouraged workers to demand higher wages

○Created divisions among workers

○Caused work to become more specialized

○Increased workers' resentment of the industrial system

10. The word them in the passage refers to

○Workers

○Political patty loyalties

○Disagreements over tactics

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○Agents of opportunity

Paragraph 1: Before 1815 manufacturing in the United States had been done in homes or shops by skilled artisans. ■As master craft workers, they imparted the knowledge of their trades to apprentices and journeymen. ■In addition, women often worked in their homes part-time, making finished articles from raw material supplied by merchant capitalists. ■After 1815 this older form of manufacturing began to give way to factories with machinery tended by unskilled or semiskilled laborers. ■Cheap transportation networks, the rise of cities, and the availability of capital and credit all stimulated the shift to factory production.

11. Look at the four squares [■] that indicate where the following sentence can be added to the passage.

This new form of manufacturing depended on the movement of goods to distant locations and a centralized source of laborers.

Where would the sentence best fit?

12. Directions: Complete the table below by indicating which of the answer choices describe characteristics of the period before 1815 and which describe characteristics of the 181 5-1 850 period. *This question is worth 3 points.*

Before 1815	1815-1850
● ●	● ● ●

Answer choices

- ○A united, highly successful labor movement took shape.
- ○Workers took pride in their workmanship.
- ○The income gap between the rich and the poor increased greatly.
- ○Transportation networks began to decline.
- ○Emphasis was placed on following schedules.
- ○Workers went through an extensive period of training.
- ○Few workers expected to own their own businesses.

参考答案：

1. ○3

This is an Inference question asking for an inference that can be supported by the passage. The correct answer is choice 3, "They were produced with more concern for quality than for speed of production." A number of statements throughout the passage support choice 3. Paragraph 1 states that "Before 1815 manufacturing in the United States had been done in homes or shops by skilled artisans . . . After 18 15 this older form of manufacturing began to give way to factories with machinery tended by unskilled or semiskilled laborers." Paragraph 2 states that "Before the rise of the factory . . . skilled artisans did not work by the clock, at a steady pace, but rather in bursts of intense labor alternating with more leisurely time." Paragraph 3 states, "The factory changed that. Goods produced by factories were not as finished or elegant as those done by hand, and pride in craftsmanship gave way to the pressure to increase rates of productivity."

Taken together, these three statements, about production rates, the rise of factories after 18 15, and the decline of craftsmanship after 18 15, support the inference that before 18 15, the emphasis had been on quality rather than on speed of production. Answer choices 1, 2, and 4 are all contradicted by the passage.

2. ○2

This is a Sentence Simplification question. As with all of these items, a single

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sentence in the passage is highlighted:

Apprentices were considered part of the family, and masters were responsible not only for teaching their apprentices a trade but also for providing them some education and for supervising their moral behavior.

The correct answer is choice 2. Choice 2 contains all of the *essential* information in the highlighted sentence. The highlighted sentence explains why (part of the family) and how (education, moral behavior) a master's responsibility went beyond teaching a trade. The essential information is the fact that the master's responsibility went beyond teaching a trade. Therefore, choice 2 contains all that is essential without changing the meaning of the highlighted sentence.

Choice 1 changes the meaning of the highlighted sentence b~ stating that masters often treated apprentices irresponsibly.

Choice 3 contradicts the essential meaning of the highlighted sentence. The fact that "Apprentices were considered part of the family . . . " suggests that they were not actual family members.

Choice 4, like choice 3, changes the meaning of the highlighted sentence by discussing family members as apprentices.

3. ○4

This is a Vocabulary question. The word being tested is disrupted. It is highlighted in the passage. The correct answer is choice 4, "upset." The word "upset" here is used in the context of "hurting productivity." When something is

hurt or damaged, it is "upset."

4. ○1

This is a Factual Information question asking for specific information that can be found in paragraph 4. The correct answer is choice I, "support the idea that it was difficult for workers to adjust to working in factories." The paragraph begins by stating that workers did not adopt new attitudes toward work easily and that the clock symbolized the new work rules. The author provides the quotation as evidence of that difficulty. There is no indication in the paragraph that workers quit due to loud noise, so choice 2 is incorrect. Choice 3 (usefulness of clocks) is contradicted by the paragraph. The factory clock was "useful," but workers hated it. Choice 4 (workers complaints as a cause of a factory's success) is not discussed in this paragraph.

5. ○4

This is a Negative Factual Information question asking for specific information that can be found in paragraph 4. Choice 4, "contact among workers who were not managers," is the correct answer. The paragraph explicitly contradicts this by stating that "factories sharply separated workers from management." The paragraph explicitly states that workers lost choice I (freedom), choice 2 (status in the community), and choice 3 (opportunities for advancement) in the new system, so those choices are all incorrect.

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6. ○1

This is a Vocabulary question. The phrase being tested is "gathered some momentum." It is highlighted in the passage. The correct answer is choice I, "made progress." To "gather momentum" means to advance with increasing speed.

7. ○1

This is a Vocabulary question. The word being tested is spearheaded. It is highlighted in the passage. The correct answer is choice 1, "led." The head of a spear leads the rest of the spear, so the crafts workers who "spearheaded" this movement led it.

8. ○3

This is a Factual Information question asking for specific information that can be found in paragraph 5. The correct answer is choice 3, "It was slow to improve conditions for workers." The paragraph states, "More than a decade of agitation did finally bring a workday shortened to 10 hours to most industries by the 1850's, and the courts also recognized workers' right to strike, but these gains had little immediate impact." This statement explicitly supports choice 3. All three other choices are contradicted by the paragraph.

9. ○2

This is a Factual Information question asking for specific information about a particular phrase in the passage. The phrase in question is highlighted in the passage. The correct answer is choice 2, "created divisions among workers." The paragraph states (emphasis added): " . . . they (workers) were divided by ethnic and racial antagonisms, gender; conflicting religious perspectives, occupational differences, political part loyalties, and disagreements over tactics." So "political party loyalties and disagreements over tactics" are explicitly stared as two causes of division among workers. The other choices are not stated and are incorrect.

10. ○1

This is a Reference question. The word being tested is them. It is highlighted in the passage. This is a simple pronoun-referent item. The word them in this sentence refers to those people to whom "the factory and industrialism were not agents of opportunity but reminders of their loss of independence and a measure of control over their lives." Choice 1, "Workers," is the only choice that refers to this type of person, so it is the correct answer.

11. ○4

This is an Insert Text question. You can see the four black squares in paragraph 1 that represent the possible answer choices here.

Before 1815 manufacturing in the United States had been done in homes or shops by skilled artisans. ■ As master craft workers, they imparted the

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knowledge of their trades to apprentices and journeymen. ■ In addition, women often worked in their homes part-time, making finished articles from raw material supplied by merchant capitalists. W After 1815 this older form of manufacturing began to give way to factories with machinery tended by unskilled or semiskilled laborers. ■ Cheap transportation networks, the rise of cities, and the availability of capital and credit all stimulated the shift to factory production.

The sentence provided, "**This new form of manufacturing depended on the movement of goods to distant locations and a centralized source of laborers**," is best inserted at square 4. The inserted sentence refers explicitly to "a new form of manufacturing." This "new form of manufacturing" is the one mentioned in the sentence preceding square 4, "factories with machinery tended by unskilled or semiskilled laborers." The inserted sentence then explains that this new system depended on "the movement of goods to distant locations and a centralized source of laborers." The sentence that follows square 4 goes on to say, "Cheap transportation networks, the rise of cities, and the availability of capital and credit all stimulated the shift to factory production." Thus the inserted sentence contains references to both the sentence before square 4 and the sentence after square 4. This is not true of any of the other possible insert points, so square 4 is the correct answer.

12.○Before 1815: 2, 6

○1815-1850: 3, 5, 7

This is a Fill in a Table question. It is completed correctly below. The correct choices for the "Before 18 15" column are 2 and 6. Choices 3, 5, and 7 belong in the "1815-1 850" column. Choices 1 and 4 should not be used in either column.

参考译文

工匠和工业化

1815 年以前，美国的制造业仅限于技术高超的工匠在自己家中和作坊中进行生产。作为师傅，工匠们将自己的手艺传授给徒弟和雇工。此外，妇女们在家中通常也会兼职从事一些生产活动，将商业资本家提供的原料制成成品。1815 年以后，这种古老的生产模式逐渐消失，雇佣没有技术或半技术劳动者的机械化工厂开始兴起。廉价的交通运输网络、城市的兴起和资本借贷的可行性都促进了制造业从手工作坊到工厂生产的转变。

想要获得适应在工厂工作中劳动力并不容易。在工厂兴起之前，工匠们只是呆家里进行生产，学徒们被视为家庭的一份子，师傅不光负责传授他们手艺，还要教育并监督他们的道德行为。雇工也明白如果他们的技艺足够精湛，就会成为受人尊敬的工匠师傅并拥有自己的作坊。同时，老练的工匠师傅们并不会按照时间计划安排生产，他们更习惯于时而闲暇，时而为了交单连夜赶工的生产方式。

工厂化生产改变了这一切。工厂生产的商品没有手工制作的那么完美和精致，工厂要求工人们提高生产效率，导致工人们对自身技艺的自豪感逐渐弱化。工厂化生产方式要求工人们加强之前没有的时间观念，要求他们严格遵守工作时间的安排，铃声响起，工人们开始操控机器稳速运转。工人们在适应新的生产方式的同时，还要摒弃旧习惯。产业主义要求工人们具备机敏、可靠和自律的素质。既然工厂生产已经专业化，旷工与迟到

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就会降低劳动生产率，也会影响工厂的正常运转。工业化进程不仅促成了一种工作组织形式的根本改变，而且改变了工作的本质。

适应新的生产方式对第一代经历产业革命的工人来说是一件非常困难的事情。工厂的时钟变成了新工作规定的象征。一名最终辞职的磨坊工人袒露真情地抱怨道：“让我们听从于叮叮当当的钟表，简直就把我们当成了活生生的机器。”工人们不仅丧失了人身自由，他们的社会地位也开始下降。和手工作坊里徒弟与监督他们的师傅之间的密切工作关系不同，工厂将工人阶层与管理层明显地区分开。很少有工人能够僭越等级被提升到管理层的岗位，甚至基本没有人能够实现身为工匠时的梦想：经营自己的生意。那些待遇优厚的工人也开始感到他们的社会地位在下降。

在这种新的经济秩序中，有时工人们会组织起来共同去保护他们的权利和传统的生活方式。比如木匠、印刷工人和裁缝等技术工人成立了联盟，并且，在 1834 年，各个独立的联盟组织成立了国家职工联盟。在 1837 年大恐慌前之的十年中，工人运动聚集了一些力量，不过随后而来的经济大萧条最终导致了工人力量的瓦解。那段时间，很少有人愿意罢工或者参与工人运动。身为工人运动先锋队的技术工匠们，并没有感到他们与半技术工人和非技术劳动者之间有显著密切的联系。直到 19 世纪 50 年代，超过十年的抗争最终使得大多数行业的工作时间缩短至 10 小时,法院也承认了工人罢工的权利，但这些权利的影响并没有立即显现。

因为对工业体系和他们社会地位丧失的不满，工人们开始联合起来，

但他们内部又被另外的因素分裂：民族和种族的敌对、性别差异、宗教信仰的冲突、职位差别、对不同政党的忠诚和工作策略的分歧等。对于工人们来说，工厂和工业化不代表着机遇，却时刻提醒着他们自身的丧失，并成为一种控制他们生活的手段。随着美国社会生产变得更加专业化和差异化，更大规模的极端财富开始出现。并且由于新兴市场只给少数人创造财富，工业体系不得不通过将劳动分割成更小的、技术含量更低的工作来降低工人们的工资。

SWIMMING MACHINES

Tunas, mackerels, and billfishes (marlins, sailfishes, and swordfish) swim continuously. Feeding, courtship, reproduction, and even "rest" are carried out while in constant motion. As a result, practically every aspect of the body form and function of these swimming "machines" is adapted to enhance their ability to swim.

Many of the adaptations of these fishes serve to reduce water resistance (drag). Interestingly enough, several of these hydrodynamic adaptations resemble features designed to improve the aerodynamics of high-speed aircraft. Though human engineers are new to the game, tunas and their relatives evolved their "high-tech" designs long ago.

Tunas, mackerels, and billfishes have made streamlining into an art form. Their bodies are sleek and compact. The body shapes of tunas, in fact, are nearly ideal from an engineering point of view. Most species lack scales over most of the body, making it smooth and slippery. The eyes lie flush with the body and do not protrude at all. They are also covered with a slick, transparent lid that reduces drag. The fins are stiff, smooth, and narrow, qualities that also help cut drag. When not in use, the fins are tucked into special grooves or depressions so that they lie flush with the body and do not break up its smooth contours. Airplanes retract their landing gear while in flight for the same reason.

Tunas, mackerels, and billfishes have even more sophisticated adaptations than these to improve their hydrodynamics. The long bill of marlins, sailfishes, and swordfish probably helps them slip through the water. Many supersonic aircraft have a similar needle at the nose.

Most tunas and billfishes have a series of keels and finlets near the tail. Although most of their scales have been lost, tunas and mackerels retain a patch of coarse scales near the head called the corselet. The keels, finlets, and corselet help direct the flow of water over the body surface in such as way as to reduce resistance (see the figure). Again, supersonic jets have similar features.

Because they are always swimming, tunas simply have to open their mouths and water is forced in and over their gills. Accordingly, they have lost most of the muscles that other fishes use to suck in water and push it past the gills. In fact, tunas must swim to breathe. They must also keep swimming to keep from sinking, since most have largely or completely lost the swim bladder, the gas-filled sac that helps most other fish remain buoyant.

One potential problem is that opening the mouth to breathe detracts from the streamlining of these fishes and tends to slow them down. Some species of tuna have specialized grooves in their tongue. It is thought that these grooves help to

channel water through the mouth and out the gill slits, thereby reducing water resistance.

There are adaptations that increase the amount of forward thrust as well as those that reduce drag. Again, these fishes are the envy of engineers. Their high, narrow tails with swept-back tips are almost perfectly adapted to provide propulsion with the least possible effort. Perhaps most important of all to these and other fast swimmers is their ability to sense and make use of swirls and eddies (circular currents) in the water. They can glide past eddies that would slow them down and then gain extra thrust by "pushing off" the eddies. Scientists and engineers are beginning to study this ability of fishes in the hope of designing more efficient propulsion systems for ships.

The muscles of these fishes and the mechanism that maintains a warm body temperature are also highly efficient. A bluefin tuna in water of 7°C (45°F) can maintain a core temperature of over 25°C (77"F). This warm body temperature may help not only the muscles to work better, but also the brain and the eyes. The billfishes have gone one step further. They have evolved special "heaters" of modified muscle tissue that warm the eyes and brain, maintaining peak performance of these critical organs.

Paragraph 1: Tunas, mackerels, and billfishes (marlins, sailfishes, and

swordfish) swim continuously. Feeding, courtship, reproduction, and even "rest" are carried out while in constant motion. As a result, practically every aspect of the body form and function of these swimming "machines" is adapted to enhance their ability to swim.

1. The word enhance in the passage is closest in meaning to

○Use

○Improve

○Counteract

○Balance

Paragraph 3: Tunas, mackerels, and billfishes have made streamlining into an art form. Their bodies are sleek and compact. The body shapes of tunas, in fact, are nearly ideal from an engineering point of view. Most species lack scales over most of the body, making it smooth and slippery. The eyes lie flush with the body and do not protrude at all. They are also covered with a slick, transparent lid that reduces drag. The fins are stiff, smooth, and narrow, qualities that also help cut drag. When not in use, the fins are tucked into special grooves or depressions so that they lie flush with the body and do not break up its smooth contours. Airplanes retract their landing gear while in flight for the same reason.

2. The word they in the passage refers to

○Qualities

○Fins

○Grooves

○Depressions

3. Why does the author mention that Airplanes retract their landing gear while in flight?

○To show that air resistance and water resistance work differently from each other

○To argue that some fishes are better designed than airplanes are

○To provide evidence that airplane engine have studied the design of fish bodies

○To demonstrate a similarity in design between certain fishes and airplanes

Paragraph 4: Tunas, mackerels, and billfishes have even more sophisticated adaptations than these to improve their hydrodynamics. The long bill of marlins, sailfishes, and swordfish probably helps them slip through the water. Many supersonic aircraft have a similar needle at the nose.

4. The word sophisticated in the passage is closest in meaning to

○Complex

○Amazing

○Creative

○Practical

5. According to paragraph4, the long bills of marlins, sailfish, and swordfish probably help these fishes by

○Increasing their ability to defend themselves

○Allowing them to change direction easily

○Increasing their ability to detect odors

○Reducing water resistance as they swim

Paragraph 6: Because they are always swimming, tunas simply have to open their mouths and water is forced in and over their gills. Accordingly, they have lost most of the muscles that other fishes use to suck in water and push it past the gills. In fact, tunas must swim to breathe. They must also keep swimming to keep from sinking, since most have largely or completely lost the swim bladder, the gas-filled sac that helps most other fish remain buoyant.

6. According to the passage, which of the following is one of the reasons that tunas are in constant motion?

○They lack a swim bladder.

○They need to suck in more water than other fishes do.

○They have large muscles for breathing.

○They cannot open their mouths unless they are in motion.

Paragraph 7: One potential problem is that opening the mouth to breathe

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detracts from the streamlining of these fishes and tends to slow them down. Some species of tuna have specialized grooves in their tongue. It is thought that these grooves help to channel water through the mouth and out the gill slits, thereby reducing water resistance.

7. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage?

Incorrect answer choices change the meaning in important ways or leave out essential information,

○These fishes often have a problem opening their mouths while swimming.

○The streamlining of these fishes prevents them from slowing down.

○The streamlining of these fishes tends to slow down their breathing.

○Opening the mouth to breathe can reduce the speed of these fishes.

8. The word channel in the passage is closest in meaning to

○Reduce

○Remove

○Direct

○Provide

Paragraph 8: There are adaptations that increase the amount of forward thrust as well as those that reduce drag. Again, these fishes are the envy of engineers. Their high, narrow tails with swept-back tips are almost perfectly

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adapted to provide propulsion with the least possible effort. Perhaps most important of all to these and other fast swimmers is their ability to sense and make use of swirls and eddies (circular currents) in the water. They can glide past eddies that would slow them down and then gain extra thrust by "pushing off" the eddies. Scientists and engineers are beginning to study this ability of fishes in the hope of designing more efficient propulsion systems for ships.

9. According to the passage, one of the adaptations of fast-swimming fishes that might be used to improve the performance of ships is these fishes' ability to

○Swim directly through eddies

○Make efficient use of water currents

○Cover great distances without stopping

○Gain speed by forcing water past their gills

Paragraph 9: The muscles of these fishes and the mechanism that maintains a warm body temperature are also highly efficient. A bluefin tuna in water of *7°C* (45°F) can maintain a core temperature of over *25°C* (77°F). This warm body temperature may help not only the muscles to work better, but also the brain and the eyes. The billfishes have gone one step further. They have evolved special "heaters" of modified muscle tissue that warm the eyes and brain, maintaining peak performance of these critical organs.

10. According to paragraph 9, which of the following is true of bluefin tunas?

○Their eyes and brain are more efficient than those of any other fish.

○Their body temperature can change greatly depending on the water temperature.

○They can swim in waters that are much colder than their own bodies.

○They have special muscle tissue that warms their eyes and brain.

Paragraph 6: ■Because they are always swimming, tunas simply have to open their mouths and water is forced in and over their gills. ■Accordingly, they have lost most of the muscles that other fishes use to suck in water and push it past the gills. ■In fact, tunas must swim to breathe. ■They must also keep swimming to keep from sinking, since most have largely or completely lost the swim bladder, the gas-filled sac that helps most other fish remain buoyant.

11. Look at the four squares [■] that indicate where the following sentence can be added to the passage.

Consequently, tunas do not need to suck in water.

Where would the sentence best fit?

12. Directions: Complete the table below by indicating which features of fishes are associated in the passage with reducing water resistance and which are associated with increasing thrust. *This question is worth 3 points.*

REDUCING WATER RESISTANCE	INCREASING THRUST
● ● ●	● ●

Features of Fishes

- The absence of scales from most of the body
- The ability to take advantage of eddies
- The ability to feed and reproduce while swimming
- Eyes that do not protrude
- Fins that are stiff, narrow, and smooth
- The habit of swimming with the mouth open
- A high, narrow tail with swept-back tips

参考答案

1. ○ 2

This is a Vocabulary question. The word being tested is enhance. It is highlighted in the passage. The correct answer is choice 2, "improve." To enhance something means to "make it better." If something has been "improved," it has been made better.

2. ○2

This is a Reference question. The word being tested is they. It is highlighted in the passage. Choice 2, "fins," is the correct answer. This is a simple pronoun-referent item. The word they refers to something that lies flush with the body when not in use. This is true only of "fins."

3. ○ 4

This is a Rhetorical Purpose question. It asks why the author mentions that "Airplanes retract their landing gear while in flight." The phrase being tested is highlighted in the passage. The correct answer is choice 4, "To demonstrate a similarity in design between certain fishes and airplanes." The paragraph in which the highlighted phrase appears describes how certain fish use their fins. The highlighted phrase is used to provide a more familiar example (airplanes) of the principle involved to help the reader visualize how fins work. The paragraph does not discuss airplanes in any other context, so choices 2 and 3 are incorrect. Air and water resistance are not mentioned in this paragraph, so

choice 1 is incorrect.

4. ○ 1

This is a Vocabulary question. The word being tested is sophisticated. It is high lighted in the passage. The correct answer is choice 1, "complex." If something is sophisticated, it is "not simple," so it must be "complex."

5. ○ 4

This is a Factual Information question asking for specific information that can be found in paragraph 4. The correct answer is choice 4, "reducing water resistance as they swim." The overall theme of the passage is how certain fish swim so efficiently. Paragraphs 1 and 2 make the general statement that "practically every aspect of the body form and function of these swimming 'machines' is adapted to enhance their ability to swim. Many of the adaptations of these fishes serve to reduce water resistance (drag)." Paragraph 4 explicitly states (emphasis added) that "Tunas, mackerels, and billfishes have even more sophisticated adaptations than these to improve their hydrodynamics. The long bill of marlins, sailfishes, and swordfish probably helps them slip through the water." This is a specific example of one adaptation that these fish have made to increase their swimming efficiency. None of the other choices is mentioned in the paragraph.

6. ○ 1

This is a Factual Information question asking for specific information that can be found in the passage. The correct answer is choice 1, "They lack a swim bladder." Paragraph 6 explicitly states ". . . tunas must swim to breathe. They must also keep swimming to keep from sinking, since most hale largely or completely lost the swim bladder . . ." The other choices are not supported by the passage.

7. ○ 4

This is a Sentence Simplification question. As with all of these items, a single sentence in the passage is highlighted:

One potential problem is that opening the mouth to breathe detracts from the streamlining of these fishes and tends to slow them down.

The correct answer is choice 4. That choice contains all of the essential ideas in the highlighted sentence. It is also the only choice that does not change the meaning of the sentence. It omits the fact that this is "a problem" and also "that it detracts from streamlining" because that information is not essential to the meaning.

Choice 1 says that these fish have trouble opening their mouths while swimming, which is not true. Choice 2, that streamlining prevents fish from slowing down, may be true, but it is not mentioned in this sentence. The fish are slowed down when they open their mouths, which reduces streamlining. Choice 3, that streamlining slows the fishes' breathing, is also not mentioned.

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8. ○ 3

This is a Vocabulary question. The word being tested is channel. It is highlighted in the passage. The correct answer is choice 3, "direct." Channel here is used as a verb, meaning to "move" or "push."

9. ○ 2

This is a Factual Information question asking for specific information that can be found in the passage. The correct answer is choice 2, "make efficient use of water currents." Paragraph 8 explicitly states: "Perhaps most important of all to these and other fast swimmers is their ability to sense and make use of swirls and eddies (circular currents) in the water. They can glide past eddies that would slow them down and then gain extra thrust by "pushing off" the eddies. Scientists and engineers are beginning to study this ability of fishes in the hope of designing more efficient propulsion systems for ships." The other choices are not mentioned in connection with the performance of ships.

10. ○ 3

This is a Factual Information question asking for specific information that can be found in paragraph 9. The correct answer is choice 3, "They can swim in waters that are much colder than their own bodies." That paragraph says, "A bluefin tuna in water of 7°C (45°F) can maintain a core temperature of over 25°C (77"F)." So it is clear that choice C is correct. Choice 1 is not stated in the

paragraph. Choice 2 is contradicted by the paragraph. Choice 4 is true of billfish, not bluefin tuna.

11. ○2

This is an Insert Text question. You can see the four black squares in paragraph 6 that represent the possible answer choices here. The last sentence of paragraph 5 is also reproduced below.

Again, supersonic jets have similar features. ■Because they are always swimming, tunas simply have to open their mouths and water is forced in and over their gills. ■ Accordingly, they have lost most of the muscles that other fishes use to suck in water and push it past the gills. In fact, tunas must swim to breathe.■They must also keep swimming to keep from sinking, since most have largely or completely lost the swim bladder, the gas-filled sac that helps most other fish remain buoyant.

The sentence provided, "**Consequently, tunas do not need to suck in water**," is best inserted at square 2. The sentence provides an explanation for the muscle loss described in the sentence that follows square 2 and is a result of the fact described in the preceding sentence, which says that because the fish are always swimming, they only have to open their mouths to suck in water. Thus if the provided sentence is inserted at square 2, it provides a logical bridge between cause and effect. The sentence makes no logical sense anywhere else.

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12.○Reducing Water Resistance: 1, 4, 5

○Increasing Thrust: 2, 7

This is a Fill in a Table question. It is completed correctly below. The correct choices for the "Reducing water resistance" column are 1, 4, and 5. Choices 2 and 7 belong in the "Increasing thrust" column. Choices 3 and 6 should not be used in either column.

参考译文

游泳机器

金枪鱼，鲭鱼，和长嘴鱼（或者说成是枪鱼、旗鱼和箭鱼）的游动从不停止。它们的进食，求偶，繁殖，甚至“休息”都在不断的运动中进行。事实上，这些游泳“机器”身体结构的每个部位及其功能都有利于它们更好地游行。

为了减少在水中前行的阻力，这类鱼身上产生了很多适应性变化。非常有趣的是，人类为了降低空气阻力加快高速飞机运行速度所进行的设计和这些鱼的适应性变化非常相似。这种设计只是人类工程师的初步尝试，但金枪鱼和他们的同类们已经拥有这种“高科技”设计很久很久。

金枪鱼、鲭鱼和长嘴鱼的流线体型简直就是一件工艺品。他们的身体光滑而坚实。从工程师的角度来看，金枪鱼的体型近乎完美。很多鱼类的绝大多数皮肤上是没有鱼鳞的，特别光滑。它们的眼睛和身体处于同一平面，根本不会凸显出来。身体表面还覆盖着一层光滑透明的外衣，鱼鳍部分坚硬、平稳而狭窄，这些特征都有助于降低前行中的阻力。当鱼儿们不使用鱼鳍时，会将它们折回到特殊的沟槽或者凹陷的地方，与身体保持同一平面，以维持它们平滑的外形。飞机收回起落装置，和这是同样的道理。

和上述特征相比，金枪鱼、鲭鱼和长嘴鱼们拥有更加精明的手段来增加它们在水中的适应性，比如他们的大长嘴。很多超音速飞机的头部就有类似的针状设计。

大多数金枪鱼和长嘴鱼的尾巴附近会长有一串脊骨和小鳍。虽然它们身上大部分地方是无鳞的，但在头部附近还保留着一块较粗的鳞片，叫做（鱼的）胸甲。脊骨、小鳍和胸甲有助于水直接流经鱼体表面，降低阻力（见附图）。同样，超音速飞机的喷头也有类似的特征。

因为金枪鱼的游动从不停止，它们必须张着嘴使水流经它们的腮。而其他鱼类的嘴里都会有一块肌肉，用于吸水和从腮里排水，金枪鱼的这块肌肉已经退化。实际上，它们必须通过游泳来呼吸。大部分金枪鱼很大程度上已经丧失了其他鱼类用于保持漂浮状态的鱼鳔,或者说已经完全丧失，因此，它们必须保持持续游泳的状态。

一个可能存在的问题在于,金枪鱼张嘴呼吸破坏了它们的流线型体型，有可能会降低它们的游泳速度。为此有的金枪鱼会在舌头上长有特殊的凹槽，以便引导水流通过嘴巴从腮缝流出，从而减少了阻力。

和降低阻力一样,金枪鱼们在游泳动力的加强上也有产生适应性变化。人类工程师在他们面前不得不自叹不如。向后倾斜并且长而狭窄的尾部非常有利于它们用最省力的方式前行。对这些鱼儿以及其他的鱼类游泳健将们来说，要保持在水里快速前行，最重要的可能就是对漩涡和逆流感知及利用的能力。漩涡会降低它们的速度，但它们在流经漩涡时不仅可以轻而易举地滑过而且会通过“推动”漩涡获得额外的动力。科学家和工程师们正在研究鱼的这种能力，以期设计出更高效的轮船推进系统。

这些鱼类的肌肉组织和保温机制也非常高效。一只蓝鳍金枪鱼在 7°C (45°F)的温度下可以保持 25°C (77°F)以上的体温。温暖的体温可以使得肌肉、大脑和眼睛更好地运转。长嘴鱼更厉害。它们有专门改善肌肉组织的加热器，可以使眼睛和大脑保持一定温度，从而保证自己的重要的器官保持在最好的运行状态中。

NINETEENTH-CENTURY POLITICS IN THE UNITED STATES

The development of the modern presidency in the United States began with Andrew Jackson who swept to power in 1829 at the head of the Democratic Party and served until 1837. During his administration, he immeasurably enlarged the power of the presidency. "The President is the direct representative of the American people," he lectured the Senate when it opposed him. "He was elected by the people, and is responsible to them." With this declaration, Jackson redefined the character of the presidential office and its relationship to the people.

During Jackson's second term, his opponents had gradually come together to form the Whig party. Whigs and Democrats held different attitudes toward the changes brought about by the market, banks, and commerce. The Democrats tended to view society as a continuing conflict between "the people”-farmers, planters, and workers-and a set of greedy aristocrats. This "paper money aristocracy" of bankers and investors manipulated the banking system for their own profit, Democrats claimed, and sapped the nation's virtue by encouraging speculation and the desire for sudden, unearned wealth. The Democrats wanted the rewards of the market without sacrificing the features of a simple agrarian republic. They wanted the wealth that the market offered without the competitive, changing society; the complex dealing; the dominance of urban centers; and the loss of independence that came with it.

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Whigs, on the other hand, were more comfortable with the market. For them, commerce and economic development were agents of civilization. Nor did the Whigs envision any conflict in society between farmers and workers on the one hand and businesspeople and bankers on the other. Economic growth would benefit everyone by raising national income and expanding opportunity. The government's responsibility was to provide a well-regulated economy that guaranteed opportunity for citizens of ability.

Whigs and Democrats differed not only in their attitudes toward the market but also about how active the central government should be in people's lives. Despite Andrew Jackson's inclination to be a strong President, Democrats as a rule believed in limited government. Government's role in the economy was to promote competition by destroying monopolies' and special privileges. In keeping with this philosophy of limited government, Democrats also rejected the idea that moral beliefs were the proper sphere of government action. Religion and politics, they believed, should be kept clearly separate, and they generally opposed humanitarian legislation.

The Whigs, in contrast, viewed government power positively. They believed that it should be used to protect individual rights and public liberty, and that it had a special role where individual effort was ineffective. By regulating the economy and competition, the government could ensure equal opportunity. Indeed, for

Whigs the concept of government promoting the general welfare went beyond the economy. In particular, Whigs in the northern sections of the United States also believed that government power should be used to foster the moral welfare of the country. They were much more likely to favor social-reform legislation and aid to education.

In some ways the social makeup of the two parties was similar. To be competitive in winning votes, Whigs and Democrats both had to have significant support among farmers, the largest group in society, and workers. Neither party could win an election by appealing exclusively to the rich or the poor. The Whigs, however, enjoyed disproportionate strength among the business and commercial classes. Whigs appealed to planters who needed credit to finance their cotton and rice trade in the world market, to farmers who were eager to sell their surpluses, and to workers who wished to improve themselves. Democrats attracted farmers isolated from the market or uncomfortable with it, workers alienated from the emerging industrial system, and rising entrepreneurs who wanted to break monopolies and open the economy to newcomers like themselves. The Whigs were strongest in the towns, cities, and those rural areas that were fully integrated into the market economy, whereas Democrats dominated areas of semisubsistence farming that were more isolated and languishing economically.

Paragraph 1: The development of the modern presidency in the United States

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began with Andrew Jackson who swept to power in 1829 at the head of the Democratic Party and served until 1837. During his administration, he immeasurably enlarged the power of the presidency. "The President is the direct representative of the American people," he lectured the Senate when it opposed him. "He was elected by the people, and is responsible to them." With this declaration, Jackson redefined the character of the presidential office and its relationship to the people.

1. The word immeasurably in the passage is closest in meaning to

○Frequently

○Greatly

○Rapidly

○Reportedly

2. According to paragraph 1, the presidency of Andrew Jackson was especially significant for which of the following reasons?

○The President granted a portion of his power to the Senate.

○The President began to address the Senate on a regular basis.

○It was the beginning of the modern presidency in the United States.

○It was the first time that the Senate had been known to oppose the President.

Paragraph 2: During Jackson's second term, his opponents had gradually

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come together to form the Whig party. Whigs and Democrats held different attitudes toward the changes brought about by the market, banks, and commerce. The Democrats tended to view society as a continuing conflict between "the people”-farmers, planters, and workers-and a set of greedy aristocrats. This "paper money aristocracy" of bankers and investors manipulated the banking system for their own profit, Democrats claimed, and sapped the nation's virtue by encouraging speculation and the desire for sudden, unearned wealth. The Democrats wanted the rewards of the market without sacrificing the features of a simple agrarian republic. They wanted the wealth that the market offered without the competitive, changing society; the complex dealing; the dominance of urban centers; and the loss of independence that came with it.

3. The author mentions bankers and investors in the passage as an example of which of the following?

○The Democratic Party's main source of support

○The people that Democrats claimed were unfairly becoming rich

○The people most interested in a return to a simple agrarian republic

○One of the groups in favor of Andrew Jackson's presidency

Paragraph 3: Whigs, on the other hand, were more comfortable with the market. For them, commerce and economic development were agents of civilization. Nor did the Whigs envision any conflict in society between farmers and workers on the one hand and businesspeople and bankers on the other.

Economic growth would benefit everyone by raising national income and expanding opportunity. The government's responsibility was to provide a well-regulated economy that guaranteed opportunity for citizens of ability.

4. According to paragraph 3, Whigs believed that commerce and economic development would have which of the following effects on society?

○They would promote the advancement of society as a whole.

○They would cause disagreements between Whigs and Democrats

○They would supply new positions for Whig Party members.

○They would prevent conflict between farmers and workers.

5. According to paragraph 3, which of the following describes the Whig Party's view of the role of government?

○To regulate the continuing conflict between farmers and businesspeople

○To restrict the changes brought about by the market

○To maintain an economy that allowed all capable citizens to benefit

○To reduce the emphasis on economic development

Paragraph 4: Whigs and Democrats differed not only in their attitudes toward the market but also about how active the central government should be in people's lives. Despite Andrew Jackson's inclination to be a strong President, Democrats as a rule believed in limited government. Government's role in the economy was to promote competition by destroying monopolies' and special privileges. In keeping

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with this philosophy of limited government, Democrats also rejected the idea that moral beliefs were the proper sphere of government action. Religion and politics, they believed, should be kept clearly separate, and they generally opposed humanitarian legislation.

6. The word inclination in the passage is closest in meaning to

○Argument

○Tendency

○Example

○Warning

7. According to paragraph 4, a Democrat would be most likely to support government action in which of the following areas?

○Creating a state religion

○Supporting humanitarian legislation

○Destroying monopolies

○Recommending particular moral beliefs

Paragraph 5: The Whigs, in contrast, viewed government power positively. They believed that it should be used to protect individual rights and public liberty, and that it had a special role where individual effort was ineffective. By regulating the economy and competition, the government could ensure equal opportunity. Indeed, for Whigs the concept of government promoting the general welfare went

beyond the economy. In particular, Whigs in the northern sections of the United States also believed that government power should be used to foster the moral welfare of the country. They were much more likely to favor social-reform legislation and aid to education.

8. The word concept in the passage is closest in meaning to

○Power

○Reality

○Difficulty

○Idea

9. Which of the following can be inferred from paragraph 5 about variations in political beliefs within the Whig Party?

○They were focused on issues of public liberty.

○They caused some members to leave the Whig party.

○They were unimportant to most Whigs.

○They reflected regional interests.

Paragraph 6: In some ways the social makeup of the two parties was similar. To be competitive in winning votes, Whigs and Democrats both had to have significant support among farmers, the largest group in society, and workers. Neither party could win an election by appealing exclusively to the rich or the poor. The Whigs, however, enjoyed disproportionate strength among the business and

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commercial classes. Whigs appealed to planters who needed credit to finance their cotton and rice trade in the world market, to farmers who were eager to sell their surpluses, and to workers who wished to improve themselves. Democrats attracted farmers isolated from the market or uncomfortable with it, workers alienated from the emerging industrial system, and rising entrepreneurs who wanted to break monopolies and open the economy to newcomers like themselves. The Whigs were strongest in the towns, cities, and those rural areas that were fully integrated into the market economy, whereas Democrats dominated areas of semisubsistence farming that were more isolated and languishing economically.

10. According to paragraph 6, the Democrats were supported by all of the following groups EXCEPT

○workers unhappy with the new industrial system

○planters involved in international trade

○rising entrepreneurs

○individuals seeking to open the economy to newcomers

11. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage?

Incorrect choices change the meaning in important ways or leave out essential information.

○Whigs were able to attract support only in the wealthiest parts of the economy because Democrats dominated in other areas.

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○Whig and Democratic areas of influence were naturally split between urban and rural areas, respectively.

○The semisubsistence farming areas dominated by Democrats became increasingly isolated by the Whigs' control of the market economy.

○The Democrats' power was greatest in poorer areas while the Whigs were strongest in those areas where the market was already fully operating.

Paragraph 2: During Jackson's second term, his opponents had gradually come together to form the Whig party. ■Whigs and Democrats held different attitudes toward the changes brought about by the market, banks, and commerce. ■The Democrats tended to view society as a continuing conflict between "the people”-farmers, planters, and workers-and a set of greedy aristocrats. ■This "paper money aristocracy" of bankers and investors manipulated the banking system for their own profit, Democrats claimed, and sapped the nation's virtue by encouraging speculation and the desire for sudden, unearned wealth. ■The Democrats wanted the rewards of the market without sacrificing the features of a simple agrarian republic. They wanted the wealth that the market offered without the competitive, changing society; the complex dealing; the dominance of urban centers; and the loss of independence that came with it.

12. Look at the four squares II that indicate where the following sentence can be added to the passage.

This new party argued against the policies of Jackson and his party

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in a number of important areas, beginning with the economy.

Where would the sentence best fit?

13. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some answer choices do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

The political system of the United States in the mid-nineteenth century was strongly influenced by the social and economic circumstances of the time.

●

●

●

Answer Choices

○The Democratic and Whig Parties developed in response to the needs of competing economic and political constituencies.

○During Andrew Jackson's two terms as President, he served as leader of both the Democratic and Whig Parties.

○The Democratic Party primarily represented the interests of the market, banks, and commerce.

○In contrast to the Democrats, the Whigs favored government aid for education.

○A fundamental difference between Whigs and Democrats involved the importance of the market in society.

○The role of government in the lives of the people was an important political distinction between the two parties.

参考答案：

1. ○2

This is a Vocabulary question. The word being tested is *immeasurably*. It is highlighted in the passage. Iiznzeasurab2y means "in a manner too big to be measured." So if Jackson enlarged the president's powers so much that the results can't be measured, he enlarged them "greatly."

2. ○3

This is a Factual Information question asking for specific information that can be found in paragraph 1. The correct answer is choice 3 because the first sentence of the paragraph explicitly states that this was when the development of the modern presidency began. The remainder of the paragraph is devoted to explaining the significant changes in government that this development involved. The result, as stated in sentence 5, was that the nature of the presidency itself was redefined. Choice 1 is contradicted by the paragraph; Jackson didn't give presidential power away, he increased it. Choice 2 is not mentioned in the paragraph: it says Jackson addressed the Senate, but not that this was the beginning of regular addresses. Choice 4, which says that this was the first time the Senate opposed the President, is not stated in the passage.

3. ○2

This is a Rhetorical Purpose question. It is asking you why the author mentions "bankers and investors" in the passage. The phrase being tested is highlighted

in the passage. The correct answer is choice 2. The author is using bankers and investors as examples of people that the Democrats claimed were "manipulating" the banking system for their own profit. That means that they were unfairly becoming rich. Choices 1, 3, and 4 are all incorrect because, based upon the passage, they seem unlikely to be true. Therefore, the author would not use them as examples.

4. ○1

This is a Factual Information question asking for specific information that can be found in paragraph 3. Choice 1 is the correct answer. The paragraph says that Whigs believed commerce and economic development "would benefit everyone." That means essentially the same thing as choice 1, which says that Whigs believed economic growth would "promote the advancement of society as a whole." "Society as a whole" is another way of saying "everyone." Choices 2 and 3 are not mentioned in the paragraph. Choice 4, about conflict between groups, is mentioned but in a different context, so it is not a belief held by Whigs.

5. ○3

This is a Factual Information question asking for specific information that can be found in paragraph 3. The correct answer is choice 3: the Whigs viewed government as responsible for maintaining an economy that allowed all capable citizens to benefit. This is a restatement of paragraph 3, sentence 5. The

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paragraph states that Whigs did not envision continuing conflict between farmers and business people, so choice 1 is wrong. Whigs favored changes brought about b) the market, so choice 2 is wrong. Whigs were in favor of increased emphasis on economic development, so choice 4 is incorrect.

6. ○2

This is a Vocabulary question. The word being tested is inclination. It is highlighted in the passage. The fact that Jackson had an inclination to be a strong President means that he preferred being strong to having limited powers. In other words, his "tendency" was to favor a strong presidency, so choice 2 is the correct answer.

7. ○3

This is a Factual Information question asking for specific information that can be found in paragraph 4. The correct answer is choice 3, which is explicitly stated in sentence 3 of the paragraph. Sentences 4 and 5 explicitly refute the other choices.

8. ○4

This is a Vocabulary question. The word being tested is concept. It is highlighted in the passage. The passage says that "for Whigs the concept of government was . . ." In other words, "the way Whigs thought about government was." That process of thinking represents ideas, so choice 4 is the

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correct answer here.

9. ○4

This is an Inference question asking for an inference that can be supported by paragraph 5. The correct answer is choice 4: variations in Whigs' political beliefs reflected regional differences. This is supported by sentence 5 of the paragraph which says that certain beliefs "particularly" reflected the views of northern Whigs. That suggests that Whigs in other regions of the country had beliefs that varied from this view and implies that such differences were regional. The other three choices are not mentioned in the passage in connection with "variations" in Whig beliefs, so there is no basis for inferring any of them.

10. ○ 2

This is a Negative Factual Information question asking for specific information that can be found in paragraph 6. Choice 2 is the correct answer. Sentence 5 says that it was Whigs, not Democrats, who had the support of planters involved in international trade. The next sentence, sentence 6, says that in contrast, Democrats had the support of the groups mentioned in choices 1, 3, and 4 ("workers," "entrepreneurs," and certain other "individuals"). Therefore, all of the groups described in the answer choices, EXCEPT the planters of choice 2, did support the Democrats.

11. ○ 4

This is a Sentence Simplification question. As with all of these items, a single sentence in the passage is highlighted:

The Whigs were strongest in the towns, cities, and those rural areas that were fully integrated into the market economy, whereas Democrats dominated areas of semisubsistence farming that were more isolated and languishing economically. The correct answer is choice 4. Choice "contains all of the essential information in the tested sentence but the order in which it is presented is reversed. The highlighted sentence describes areas of Whig strength first, and then the areas where Democrats were strong. The correct answer, choice 4, describes Democrat strongholds first, and then Whig areas. No meaning has been changed, and no information has been left out. Choice 1 is incorrect because it states that Whigs were able to attract support only in the wealthiest areas. The highlighted sentence does not say that; it says their support came from places integrated into the market, which can include areas of all economic levels.

Choice 2 is incorrect because it says that the two parties were split between rural and urban areas. However, the highlighted sentence says that Whigs were strong in rural areas that were integrated into the market economy. In other words, the split between the parties was based on the degree to which an area was integrated into the market, not whether it was urban or rural. Choice 3 is incorrect because the highlighted sentence makes no mention of how (or if) the Whigs' control of the market economy affected the areas dominated by the

Democrats.

12. ○ 1

This is an Insert Text question. You can see the four black squares in paragraph 2 that represent the possible answer choices here.

During Jackson's second term, his opponents had gradually come together to form the Whig party. ■ Whigs and Democrats held different attitudes toward the changes brought about by the market, banks, and commerce. ■ The Democrats tended to view society as a continuing conflict between "the people “farmers, planters, and workers-and a set of greedy aristocrats. ■ This "paper money aristocracy" of bankers and investors manipulated the banking system for their own profit, Democrats claimed, and sapped the nation's virtue by encouraging speculation and the desire for sudden, unearned wealth. ■The Democrats wanted the rewards of the market without sacrificing the features of a simple agrarian republic. They wanted the wealth that the market offered without the competitive, changing society; the complex dealing; the dominance of urban centers; and the loss of independence that came with it.

The sentence provided, "**This new party argued against the policies of Jackson and his party in a number of important areas, beginning with the economy,**" is best inserted at square 1. Square 1 is correct because the phrase "This new party" refers directly and only to the Whigs, who are first

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mentioned (as a recently formed party) in sentence 1 of this paragraph. Square 2 is incorrect because the sentence before is not limited to the new Whig party. It discusses both Whigs and Democrats. Squares 3 and 4 are both incorrect because the sentences preceding them refer to the Democrats (the old party), not the Whigs.

13. ○1, 5, 6

This is a Prose Summary question. It is completed correctly below. The correct choices are 1, 5, and 6. Choices 2, 3, and 4 are therefore incorrect.

参考译文

十九世纪美国政治

美国现代总统制度的发展是从安德鲁杰克逊开始的。这位民主党领导人在 1829 年掌权，直至 1837 年卸任。在他任职期间，总统的权力被无限量地扩大了。参议院反对他时，他曾说：“总统是美国人民的直接代表，美国总统由公民选举产生，对公民负责。”杰克逊用这番话重新定义了内阁的角色，及其与民众的关系。

在杰克逊的第二任任职期间，他的反对者们逐渐联合起来形成了辉格党。辉格党和民主党在市场、银行、商业引发的变化上持有不同的态度。民主党倾向于把社会视作平民（农民、种植园主、工人）和一小撮贪婪的贵族间持续的斗争。他们宣称，那些银行家和投资者们都是“钞票贵族”，他们在自己利益的驱使下操纵着银行系统，并且以鼓励投机和迅速赚取不义之财的行为败坏国民道德。民主党人既想从市场经济中获得好处，又不想牺牲单一土地所有权的共和体制。他们想要市场经济带来的财富而不想要竞争，不想改变社会；不想要复杂的交易；不要大城市的主宰和随着市场经济而来的独立性的丧失。

另一方面，辉格党对市场更为适应。对于他们来说，商业和经济的发展是文明化的动力。然而，辉格党人并没有预见农民、工人和商人、银行家之间的冲突。他们认为，经济发展会通过增加国民收入和就业机会使每个人受益。政府的职责就是提供一个井然有序运作良好的经济环境，保证

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给每一个有能力的公民机会。

辉格党和民主党的分歧不仅表现在对市场的态度上，而且表现在中央政府究竟该在人民生活中起到多少作用上。抛开安德鲁杰克逊想做一个强势总统不谈，民主党本身就主张限制政府的做法。政府在经济中的角色就是通过摧毁垄断和特权来鼓励竞争。为了遵循限制政府的做法，民主党人同样否定了道德准则属政府行为的范畴。民主党人确信，宗教和政治应划清界限，而大体上，他们也反对人道主义立法。

相反地，政府权力在辉格党人眼中是积极的。他们认为，应该用政府权力保护个人权力和公众自由，在个人努力无效时扮演特殊角色。通过规划经济和竞争，政府可以保证机会平等。确实，辉格党的政府促进公众福利超过了促进经济。特别是，美国北部的辉格党还认为政府力量应该用来推广国家的道德福利。他们更加偏好社会改革法案和补助教育。

两个政党在社会结构、人员构成上具有某种程度的相似性。为了在投票中更具竞争力，辉格党和民主党都要在社会最大群体即农民和工人当中获得大力支持。任何一个党派若只讨好穷人或富人都不可能赢得选举。然而，辉格党偏好把精力花费在商业阶层上。辉格党博得了需要信用来贷款以在世界贸易中出售棉花和米的种地的人、渴望卖出余粮的农民和希望改变现状的工人的喜好。民主党则吸引了隔离于市场外或不习惯市场的农民、工业系统外的工人和想打破垄断开发新市场的新兴小企业家的欢心。辉格党在城镇市区还有完全融入市场经济的农村区域很强势，而民主党主宰了

与市场隔绝，经济日渐衰微的半自给农耕地区。

THE EXPRESSION OF EMOTIONS

Joy and sadness are experienced by people in all cultures around the world, but how can we tell when other people are happy or despondent? It turns out that the expression of many emotions may be universal. Smiling is apparently a universal sign of friendliness and approval. Baring the teeth in a hostile way, as noted by Charles Darwin in the nineteenth century, may be a universal sign of anger. As the originator of the theory of evolution, Darwin believed that the universal recognition of facial expressions would have survival value. For example, facial expressions could signal the approach of enemies (or friends) in the absence of language.

Most investigators concur that certain facial expressions suggest the same emotions in all people. Moreover, people in diverse cultures recognize the emotions manifested by the facial expressions. In classic research Paul Ekman took photographs of people exhibiting the emotions of anger, disgust, fear, happiness, and sadness. He then asked people around the world to indicate what emotions were being depicted in them. Those queried ranged from European college students to members of the Fore, a tribe that dwells in the New Guinea highlands. All groups, including the Fore, who had almost no contact with Western culture, agreed on the portrayed emotions. The Fore also displayed

familiar facial expressions when asked how they would respond if they were the characters in stories that called for basic emotional responses. Ekman and his colleagues more recently obtained similar results in a study of ten cultures in which participants were permitted to report that multiple emotions were shown by facial expressions. The participants generally agreed on which two emotions were being shown and which emotion was more intense.

Psychological researchers generally recognize that facial expressions reflect emotional states. In fact, various emotional states give rise to certain patterns of electrical activity in the facial muscles and in the brain. The facial-feedback hypothesis argues, however, that the causal relationship between emotions and facial expressions can also work in the opposite direction. According to this hypothesis, signals from the facial muscles ("feedback) are sent back to emotion centers of the brain, and so a person's facial expression can influence that person's emotional state. Consider Darwin's words: "The free expression by outward signs of an emotion intensifies it. On the other hand, the repression, as far as possible, of all outward signs softens our emotions." Can smiling give rise to feelings of good will, for example, and frowning to anger?

Psychological research has given rise to some interesting findings

concerning the facial-feedback hypothesis. Causing participants in experiments to smile, for example, leads them to report more positive feelings and to rate cartoons (humorous drawings of people or situations) as being more humorous. When they are caused to frown, they rate cartoons as being more aggressive.

What are the possible links between facial expressions and emotion? One link is arousal, which is the level of activity or preparedness for activity in an organism. Intense contraction of facial muscles, such as those used in signifying fear, heightens arousal. Self-perception of heightened arousal then leads to heightened emotional activity. Other links may involve changes in brain temperature and the release of neurotransmitters (substances that transmit nerve impulses.) The contraction of facial muscles both influences the internal emotional state and reflects it. Ekman has found that the so-called Duchenne smile, which is characterized by "crow's feet" wrinkles around the eyes and a subtle drop in the eye cover fold so that the skin above the eye moves down slightly toward the eyeball, can lead to pleasant feelings.

Ekman's observation may be relevant to the British expression "keep a stiff upper lip" as a recommendation for handling stress. It might be that a "stiff" lip suppresses emotional response -- as long as the lip is not quivering with fear or tension. But when the emotion that leads to stiffening the lip is more intense, and involves strong muscle tension, facial feedback may heighten emotional response.

Paragraph 1：Joy and sadness are experienced by people in all cultures around the world, but how can we tell when other people are happy or despondent? It turns out that the expression of many emotions may be universal. Smiling is apparently a universal sign of friendliness and approval. Baring the teeth in a hostile way, as noted by Charles Darwin in the nineteenth century, may be a universal sign of anger. As the originator of the theory of evolution, Darwin believed that the universal recognition of facial expressions would have survival value. For example, facial expressions could signal the approach of enemies (or friends) in the absence of language.

1. The word despondent in the passage is closest in meaning to

○Curious

○Unhappy

○Thoughtful

○Uncertain

2. The author mentions "Baring the teeth in a hostile way" in order to

○Differentiate one possible meaning of a particular facial expression from other meanings of it

○Support Darwin's theory of evolution

○Provide an example of a facial expression whose meaning is widely

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understood

○Contrast a facial expression that is easily understood with other facial expressions

Paragraph 2: Most investigators concur that certain facial expressions suggest the same emotions in all people. Moreover, people in diverse cultures recognize the emotions manifested by the facial expressions. In classic research Paul Ekman took photographs of people exhibiting the emotions of anger, disgust, fear, happiness, and sadness. He then asked people around the world to indicate what emotions were being depicted in them. Those queried ranged from European college students to members of the Fore, a tribe that dwells in the New Guinea highlands. All groups, including the Fore, who had almost no contact with Western culture, agreed on the portrayed emotions. The Fore also displayed familiar facial expressions when asked how they would respond if they were the characters in stories that called for basic emotional responses. Ekman and his colleagues more recently obtained similar results in a study of ten cultures in which participants were permitted to report that multiple emotions were shown by facial expressions. The participants generally agreed on which two emotions were being shown and which emotion was more intense.

3. The word concur in the passage is closest in meaning to

○Estimate

○Agree

○Expect

○Understand

4. The word them in the passage refers to

○Emotions

○People

○Photographs

○Cultures

5. According to paragraph 2, which of the following was true of the Fore people of New Guinea?

○They did not want to be shown photographs.

○They were famous for their story-telling skills.

○They knew very little about Western culture.

○They did not encourage the expression of emotions.

6. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage?

Incorrect choices change the meaning in important ways or leave out essential information.

○The Fore's facial expressions indicated their unwillingness to pretend to be story characters.

○The Fore were asked to display familiar facial expressions when they told

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their stories.

○The Fore exhibited the same relationship of facial expressions and basic emotions that is seen in Western culture when they acted out stories.

○The Fore were familiar with the facial expressions and basic emotions of characters in stories.

Paragraph 3: Psychological researchers generally recognize that facial expressions reflect emotional states. In fact, various emotional states give rise to certain patterns of electrical activity in the facial muscles and in the brain. The facial-feedback hypothesis argues, however, that the causal relationship between emotions and facial expressions can also work in the opposite direction. According to this hypothesis, signals from the facial muscles ("feedback) are sent back to emotion centers of the brain, and so a person's facial expression can influence that person's emotional state. Consider Darwin's words: "The free expression by outward signs of an emotion intensifies it. On the other hand, the repression, as far as possible, of all outward signs softens our emotions." Can smiling give rise to feelings of good will, for example, and frowning to anger?

7. According to the passage, what did Darwin believe would happen to human emotions that were not expressed?

○They would become less intense.

○They would last longer than usual.

○They would cause problems later.

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○They would become more negative

Paragraph 4; Psychological research has given rise to some interesting findings concerning the facial-feedback hypothesis. Causing participants in experiments to smile, for example, leads them to report more positive feelings and to rate cartoons (humorous drawings of people or situations) as being more humorous. When they are caused to frown, they rate cartoons as being more aggressive.

8. According to the passage, research involving which of the following supported the facial-feedback hypothesis?

○The reactions of people in experiments to cartoons

○The tendency of people in experiments to cooperate

○The release of neurotransmitters by people during experiments

○The long-term effects of repressing emotions

9. The word rate in the passage is closest in meaning to

○Judge

○Reject

○Draw

○Want

Paragraph 6: Ekman's observation may be relevant to the British expression

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“keep a stiff upper lip” as a recommendation for handling stress. It might be that a “stiff” lip suppresses emotional response -- as long as the lip is not quivering with fear or tension. But when the emotion that leads to stiffening the lip is more intense, and involves strong muscle tension, facial feedback may heighten emotional response.

10. The word relevant in the passage is closest in meaning to

○Contradictory

○Confusing

○Dependent

○Applicable

11. According to the passage, stiffening the upper lip may have which of the following effects?

○It first suppresses stress, then intensifies it.

○It may cause fear and tension in those who see it.

○It can damage the lip muscles.

○It may either heighten or reduce emotional response.

Paragraph 2: ■Most investigators concur that certain facial expressions suggest the same emotions in all people. ■Moreover, people in diverse cultures recognize the emotions manifested by the facial expressions. ■In classic research Paul Ekman took photographs of people exhibiting the emotions of anger, disgust,

fear, happiness, and sadness. ■He then asked people around the world to indicate what emotions were being depicted in them. Those queried ranged from European college students to members of the Fore, a tribe that dwells in the New Guinea highlands. All groups, including the Fore, who had almost no contact with Western culture, agreed on the portrayed emotions. The Fore also displayed familiar facial expressions when asked how they would respond if they were the characters in stories that called for basic emotional responses. Ekman and his colleagues more recently obtained similar results in a study of ten cultures in which participants were permitted to report that multiple emotions were shown by facial expressions. The participants generally agreed on which two emotions were being shown and which emotion was more intense.

12. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

This universality in the recognition of emotions was demonstrated by using rather simple methods.

Where would the sentence best fit?

13. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

Psychological research seems to confirm that people associate particular facial expressions with the same emotions across cultures.

●

●

●

Answer Choices

○Artificially producing the Duchenne smile can cause a person to have pleasant feelings.

○Facial expressions and emotional states interact with each other through a variety of feedback mechanisms.

○People commonly believe that they can control their facial expressions so that their true emotions remain hidden.

○A person's facial expression may reflect the person's emotional state.

○Ekman argued that the ability to accurately recognize the emotional content of facial expressions was valuable for human beings.

○Facial expressions that occur as a result of an individual's emotional state may themselves feed back information that influences the person's emotions.

参考答案：

1. ○ 2

This is a Vocabulary question. The word being tested is despondent. It is highlighted in the passage. The correct answer is choice 2, "unhappy." The sentence in which the highlighted word appears uses despondent as a contrast to happy. Since unhappy is the opposite of happy, it provides the fullest possible contrast and is equivalent to the contrast between Joy and sadness at the beginning of the sentence.

2. ○ 3

This is a Rhetorical Purpose question. It is asking you why the author mentions "baring the teeth in a hostile way" in the passage. This phrase is highlighted in the passage. The correct answer is choice 3; baring the teeth is an example of a facial expression whose meaning is widely understood. The central theme of paragraph 1 of the passage is facial expressions that are universal. The author provides various examples of such expressions, and baring the teeth is mentioned as a universal sign of anger. The other choices are all mentioned in the passage, but not in conjunction with baring the teeth, so they are all incorrect.

3. ○ 2

This is a Vocabulary question. The word being tested is concur. It is highlighted in the passage. The correct answer is choice 2, "agree." Concur means to agree,

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so if investigators concur about the meaning of certain facial expressions, they agree on their meaning.

4. ○ 3

This is a Reference question. The word being tested is them, and it is highlighted in the passage. This is a simple pronoun-referent item. The word them refers to the photographs that Paul Eckman showed to people from diverse cultures, so the correct answer is choice 3, "photographs."

5. ○ 3

This is a Factual Information question asking for specific information that can be found in paragraph 2. The correct answer is choice 3, which states that the Fore people of New Zealand knew very little about Western culture. The paragraph explicitly says that the Fore had almost no contact with Western culture. None of the other three choices is mentioned in connection with the Fore, so none of them is correct.

6. ○ 3

This is a Sentence Simplification question. As with all of these items, a single sentence in the passage is highlighted:

The Fore also displayed familiar facial expressions when asked how they would respond if they were the characters in stories that called for basic emotional responses.

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The correct answer is choice 3. It contains all of the essential ideas in the highlighted sentence without changing the meaning. This choice says that the Fore "exhibited the same relationship of facial and basic emotions that is seen in Western culture when they acted out stories." The sentence that precedes the highlighted sentence states that in a survey, the Fore agreed with Westerners on how various emotions are portrayed. Then the highlighted sentence says that in a different situation (story-telling) the Fores' expressions were also familiar; that is, these expressions were the same as those exhibited by Westerners in this situation. Choices 1 and 2 are incorrect because each one changes the highlighted sentence into a statement that is not true. Choice 4 is incorrect because it says that the Fore were familiar with the facial expressions of characters in stories. The highlighted sentence says that it was the investigators who were familiar with the Fores' expressions. This is a change in meaning, so it is incorrect.

7. ○ 1

This is a Factual Information question asking for specific information that can be found in the passage. The correct answer is choice 1, emotions that are not expressed become less intense. This is correct based on the direct quotation of Darwin in paragraph 3. In that quotation, Darwin says that emotions that are freely expressed become more intense, while "on the other hand those that are not freely expressed are "softened," meaning that they become less intense. Choices 2, 3, and 4 are all incorrect because there is nothing in the passage that

indicates Darwin ever believed these things about expressing emotions. Some or all of them may actually be true, but there is nothing in this passage that supports them.

8. ○ 1

This is a Factual Information question asking for specific information that can be found in the passage. You can see that the phrase "The facial-feedback hypothesis" is highlighted where it first appears in the passage in paragraph 3. The correct answer is choice 1, research supporting this hypothesis came from studying experiments of the reactions of people to cartoons. This idea is found in paragraph 4, which uses these experiments as an example of how facial feedback works. Choice 3, the release of neurotransmitters, is mentioned in paragraph 5 but, not in connection with the facial-feedback hypothesis, so it is incorrect. Choices 2 and 4 are not explicitly mentioned at all in the passage.

9. ○ 1

This is a Vocabulary question. The word being tested is rate, and it is highlighted in the passage. The correct answer is choice 1, "judge." Rate in this context means "to judge."

10. ○ 4

This is a Vocabulary question. The word being tested is relevant, and it is highlighted in the passage. The correct answer is choice 4, "applicable.

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"Relevant means that Ekman's observation applies ("is applicable") to an expression.

11. ○ 4

This is a Factual Information question asking for specific information that can be found in the passage. The correct answer is choice 4; stiffening the upper lip may either heighten or reduce emotional response. This is stated explicitly in paragraph 6 of the passage as a possible paradox in the relationship between facial expressions and emotions.

Choice 1 is incorrect because paragraph 6 contradicts it.

Choice 2 is incorrect because the passage mentions only the fear and tension of a person trying to keep a stiff upper lip, not any fear or tension that expression may cause in others.

Choice 3 is incorrect because there is no suggestion anywhere in the passage that stiffening the upper lip may damage lip muscles.

12. ○3

This is an Insert Text question. You can see the four black squares in paragraph 2 that represent the possible answer choices here.

■Most investigators concur that certain facial expressions suggest the same emotions in all people. ■Moreover, people in diverse cultures recognize the emotions manifested by the facial expressions. ■In classic research Paul Ekman took photographs of people exhibiting the emotions of anger, disgust,

fear, happiness, and sadness. ■He then asked people around the world to indicate what emotions were being depicted in them. Those queried ranged from European college students to members of the Fore, a tribe that dwells in the New Guinea highlands. All groups, including the Fore, who had almost no contact with Western culture, agreed on the portrayed emotions. The Fore also displayed familiar facial expressions when asked how they would respond if they were the characters in stories that called for basic emotional responses. Ekman and his colleagues more recently obtained similar results in a study of ten cultures in which participants were permitted to report that multiple emotions were shown by facial expressions. The participants generally agreed on which two emotions were being shown and which emotion was more intense.

The sentence provided, "**This universality in the recognition of emotions was demonstrated by using rather simple methods**," is best inserted at square 3. Square 3 is correct because the inserted sentence begins with the phrase "This universality." The universality being referred to is the fact, stated in the second sentence, that "people in diverse cultures recognize the emotions manifested by the facial expressions."

None of the other answer choices follows a sentence that contains a universal statement. Sentence 1 mentions that "Most investigators concur," which means that some do not. Therefore this is not a universal statement. Squares 2 and 4 are incorrect because there is nothing in either sentence to which "This

universality" could refer.

13. ○2, 4, 6

This is a Prose Summary question. It is completed correctly below. The correct choices are 2, 4, and 6. Choices 1, 3, and 5 are therefore incorrect.

参考译文

情感的表达

在世界范围内各种不同的文化里，人们都是要经历欢乐和悲伤的，但我们怎么区分其他人是高兴还是沮丧呢？事实上，很多情感的表达可能是通用的。比如，微笑显然表示友好和赞同。查尔斯达尔文是进化论的创始人，他在 19 世纪曾指出，怀有敌意地露出牙齿表现的是愤怒的情绪，人类对面部表情的认知具有一定的生存值。例如，面部表情可以以非语言的方式帮你判断迎面而来的是敌还是友。

很多调查得出了同样的结论，即人类的某些面部表情表达的含义是通用的。此外，不同文化背景的人可以通过面部表情的识别来判断对方的情绪。在一个经典的研究项目中，保罗埃克曼拍下了一组人的照片，分别表示愤怒、厌恶、恐惧、幸福、悲伤。然后，他安排来自世界各地的人们识别照片中所表达的情感。这些人包括欧洲大学生，居住在新几内亚高地的部落等。包括几乎从未接触过西方文化的人在内的所有人得出了一致的答案。此外，问卷中还给出了一些人们熟悉的基本表情，要求答卷者回答如果你是故事中的人物你会作出哪种基本表情？埃克曼和他的同事们从近期的一项统计中得出了相同的结论，他们对来自 10 个不同文化背景的参与者们进行了调查，参与者可以通过多种面部表情传达复杂的情绪。画面表达了哪两种情感？其中那张更严肃？答案基本一致。

研究心理学的学者们通常认为，面部表情可以反映人们内心的情绪状

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态。事实上，各种情绪状态的波动都会使得面部肌肉和大脑的电波活动增加。然而，脸部回馈假说 论者们却坚持，面部表情和情绪之间的因果关系也可能是反的。他们认为，脸部肌肉承载的信号会被传至大脑的控制情绪的部位中，因此人类面部表情会影响他们的情绪。试想达尔文的话：“自由的情绪表达方式会增强心中的情感。相反，如果抑制这种表达则会削弱心中的情感。” 比如，微笑可以让你心情大好吗？皱眉会让你变得愤怒吗？

关于 脸部回馈假说，心理学研究提供了一些有趣的发现。比如，让参与实验的人们微笑，他们会表现的更加积极，他们评价图片相对而言更加风趣幽默。当他们皱眉头时，则变得加咄咄逼人。

面部表情和内心情感之间存在什么样可能的联系呢？首先，是刺激。这是一个有机体活动的准备阶段。面部肌肉的紧张收缩会加剧这种刺激，如那些表现得极度的恐惧肌肉收缩。加强刺激的自我感知会加剧内心各种情绪。其次，他们的联系可能会涉及到大脑温度变化和神经递质的释放（传递神经冲动的物质）。面部肌肉的收缩反映并影响内心情绪状态。埃克曼发现，所谓的杜兴微笑，就是指眼睛周围的鱼尾纹和眼皮的微微下垂，引发眼睛表面的皮肤轻微朝着眼球方向下降，从而引起愉快的感觉。

埃克曼的看法可能与英国习语“保持咬紧牙关”有关，人们可以用过紧咬牙关缓解自身压力。很有可能是因为紧咬牙关抑制了消极情绪，只要嘴唇没紧张或者恐惧得发抖。但是，当内心情绪导致僵硬的嘴唇更加紧张

时，面部表情强有力的收缩很有可能会加剧内心的情绪反应。

GEOLOGY AND LANDSCAPE

Most people consider the landscape to be unchanging, but Earth is a dynamic body, and its surface is continually altering-slowly on the human time scale, but relatively rapidly when compared to the great age of Earth (about 4,500 billion years). There are two principal influences that shape the terrain: constructive processes such as uplift, which create new landscape features, and destructive forces such as erosion, which gradually wear away exposed landforms.

Hills and mountains are often regarded as the epitome of permanence, successfully resisting the destructive forces of nature, but in fact they tend to be relatively short-lived in geological terms. As a general rule, the higher a mountain is, the more recently it was formed; for example, the high mountains of the Himalayas are only about 50 million years old. Lower mountains tend to be older, and are often the eroded relics of much higher mountain chains. About 400 million years ago, when the present-day continents of North America and Europe were joined, the Caledonian mountain chain was the same size as the modern Himalayas. Today, however, the relics of the Caledonian orogeny (mountain-building period) exist as the comparatively low mountains of Greenland, the northern Appalachians in the United States, the Scottish Highlands, and the Norwegian coastal plateau.

The Earth's crust is thought to be divided into huge, movable segments, called

plates, which float on a soft plastic layer of rock. Some mountains were formed as a result of these plates crashing into each other and forcing up the rock at the plate margins. In this process, sedimentary rocks that originally formed on the seabed may be folded upwards to altitudes of more than 26,000 feet. Other mountains may be raised by earthquakes, which fracture the Earth's crust and can displace enough rock to produce block mountains. A third type of mountain may be formed as a result of volcanic activity which occurs in regions of active fold mountain belts, such as in the Cascade Range of western North America. The Cascades are made up of lavas and volcanic materials. Many of the peaks are extinct volcanoes.

Whatever the reason for mountain formation, as soon as land rises above sea level it is subjected to destructive forces. The exposed rocks are attacked by the various weather processes and gradually broken down into fragments, which are then carried away and later deposited as sediments. Thus, any landscape represents only a temporary stage in the continuous battle between the forces of uplift and those of erosion.

The weather, in its many forms, is the main agent of erosion. Rain washes away loose soil and penetrates cracks in the rocks. Carbon dioxide in the air reacts with the rainwater, forming a weak acid (carbonic acid) that may chemically attack the rocks. The rain seeps underground and the water may reappear later as springs. These springs are the sources of streams and rivers, which cut through the rocks and carry away debris from the mountains to the lowlands.

Under very cold conditions, rocks can be shattered by ice and frost. Glaciers may form in permanently cold areas, and these slowly moving masses of ice cut out valleys, carrying with them huge quantities of eroded rock debris. In dry areas the wind is the principal agent of erosion. It carries fine particles of sand, which bombard exposed rock surfaces, thereby wearing them into yet more sand. Even living things contribute to the formation of landscapes. Tree roots force their way into cracks in rocks and, in so doing, speed their splitting. In contrast, the roots of grasses and other small plants may help to hold loose soil fragments together, thereby helping to prevent erosion by the wind.

Paragraph 1: Most people consider the landscape to be unchanging, but Earth is a dynamic body, and its surface is continually altering-slowly on the human time scale, but relatively rapidly when compared to the great age of Earth (about 4,500 billion years). There are two principal influences that shape the terrain: constructive processes such as uplift, which create new landscape features, and destructive forces such as erosion, which gradually wear away exposed landforms.

1. According to paragraph 1, which of the following statements is true of changes in Earth's landscape?

○They occur more often by uplift than by erosion

○They occur only at special times.

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○They occur less frequently now than they once did.

○They occur quickly in geological terms.

2. The word relatively in the passage is closest in meaning to

○Unusually

○Comparatively

○Occasionally

○Naturally

Paragraph 2: Hills and mountains are often regarded as the epitome of permanence, successfully resisting the destructive forces of nature, but in fact they tend to be relatively short-lived in geological terms. As a general rule, the higher a mountain is, the more recently it was formed; for example, the high mountains of the Himalayas are only about 50 million years old. Lower mountains tend to be older, and are often the eroded relics of much higher mountain chains. About 400 million years ago, when the present-day continents of North America and Europe were joined, the Caledonian mountain chain was the same size as the modern Himalayas. Today, however, the relics of the Caledonian orogeny (mountain-building period) exist as the comparatively low mountains of Greenland, the northern Appalachians in the United States, the Scottish Highlands, and the Norwegian coastal plateau.

3. Which of the following can be inferred from paragraph 2 about the

mountains of the Himalayas?

○Their current height is not an indication of their age.

○At present, they are much higher than the mountains of the Caledonian range.

○They were a uniform height about 400 million years ago.

○They are not as high as the Caledonian mountains were 400 million years ago.

4. The word relics in the passage IS closest in meaning to

○Resemblances

○Regions

○Remains

○Restorations

Paragraph 3: The Earth's crust is thought to be divided into huge, movable segments, called plates, which float on a soft plastic layer of rock. Some mountains were formed as a result of these plates crashing into each other and forcing up the rock at the plate margins. In this process, sedimentary rocks that originally formed on the seabed may be folded upwards to altitudes of more than 26,000 feet. Other mountains may be raised by earthquakes, which fracture the Earth's crust and can displace enough rock to produce block mountains. A third type of mountain may be formed as a result of volcanic activity which occurs in regions of active fold mountain belts, such as in the Cascade Range of western North America. The

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Cascades are made up of lavas and volcanic materials. Many of the peaks are extinct volcanoes.

5. According to paragraph 3, one cause of mountain formation is the

○effect of climatic change on sea level

○slowing down of volcanic activity

○force of Earth's crustal plates hitting each other

○replacement of sedimentary rock with volcanic rock

Paragraph 5: The weather, in its many forms, is the main agent of erosion. Rain washes away loose soil and penetrates cracks in the rocks. Carbon dioxide in the air reacts with the rainwater, forming a weak acid (carbonic acid) that may chemically attack the rocks. The rain seeps underground and the water may reappear later as springs. These springs are the sources of streams and rivers, which cut through the rocks and carry away debris from the mountains to the lowlands.

6. Why does the author mention Carbon dioxide in the passage?

○To explain the origin of a chemical that can erode rocks

○To contrast carbon dioxide with carbonic acid

○To give an example of how rainwater penetrates soil

○To argue for the desirability of preventing erosion

7. The word seeps in the passage is closest in meaning to

○Dries gradually

○Flows slowly

○Freezes quickly

○Warms slightly

Paragraph 6: Under very cold conditions, rocks can be shattered by ice and frost. Glaciers may form in permanently cold areas, and these slowly moving masses of ice cut out valleys, carrying with them huge quantities of eroded rock debris. In dry areas the wind is the principal agent of erosion. It carries fine particles of sand, which bombard exposed rock surfaces, thereby wearing them into yet more sand. Even living things contribute to the formation of landscapes. Tree roots force their way into cracks in rocks and, in so doing, speed their splitting. In contrast, the roots of grasses and other small plants may help to hold loose soil fragments together, thereby helping to prevent erosion by the wind.

8. The word them in the passage refers to

○Cold areas

○Masses of ice

○Valleys

○Rock debris

Paragraph 2: Hills and mountains are often regarded as the epitome of

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permanence, successfully resisting the destructive forces of nature, but in fact they tend to be relatively short-lived in geological terms. As a general rule, the higher a mountain is, the more recently it was formed; for example, the high mountains of the Himalayas are only about 50 million years old. Lower mountains tend to be older, and are often the eroded relics of much higher mountain chains. About 400 million years ago, when the present-day continents of North America and Europe were joined, the Caledonian mountain chain was the same size as the modern Himalayas. Today, however, the relics of the Caledonian orogeny (mountain-building period) exist as the comparatively low mountains of Greenland, the northern Appalachians in the United States, the Scottish Highlands, and the Norwegian coastal plateau.

9. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage?

Incorrect choices change the meaning in important ways or leave out essential information.

○When they are relatively young, hills and mountains successfully resist the destructive forces of nature.

○Although they seem permanent, hills and mountains exist for a relatively short period of geological time.

○Hills and mountains successfully resist the destructive forces of nature, but only for a short time.

○Hills and mountains resist the destructive forces of nature better than other

types of landforms.

Paragraph 6: Under very cold conditions, rocks can be shattered by ice and frost. Glaciers may form in permanently cold areas, and these slowly moving masses of ice cut out valleys, carrying with them huge quantities of eroded rock debris. ■In dry areas the wind is the principal agent of erosion. ■It carries fine particles of sand, which bombard exposed rock surfaces, thereby wearing them into yet more sand. ■Even living things contribute to the formation of landscapes. ■Tree roots force their way into cracks in rocks and, in so doing, speed their splitting. In contrast, the roots of grasses and other small plants may help to hold loose soil fragments together, thereby helping to prevent erosion by the wind.

10. According to paragraph 6, which of the following is both a cause and result of erosion?

○Glacial activity

○Rock debris

○Tree roots

○Sand

11. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

Under different climatic conditions, another type of destructive force contributes to erosion.

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Where would the sentence best fit?

12. Directions: Three of the answer choices below are used in the passage to illustrate constructive processes and two are used to illustrate destructive processes. Complete the table by matching appropriate answer choices to the processes they are used to illustrate. *This question is worth 3 points.*

CONSTRUCTIVE PROCESSES	DESTRUCTIVE PROCESSSES
● ● ●	● ●

Answer Choices:

○Collision of Earth's crustal plates

○Separation of continents

○Wind-driven sand

○Formation of grass roots in soil

○arthquakes

○Volcanic activity

○Weather processes

参考答案：

1. ○ 4

This is a Factual Information question asking for specific information that can be found in paragraph 1. The correct answer is choice 4. Sentence 1 of the paragraph explicitly states that Earth's landscape changes relatively rapidly compared to Earth's overall age. Choice 1, on the frequency of landscape changes, is contradicted by the paragraph. Choice 2, that landscape changes occur only at special times, is also contradicted by the paragraph. Choice 3, the frequency of landscape changes, is not mentioned.

2. ○ 2

This is a Vocabulary question. The word being tested is *relatively*, and it is highlighted

in the passage. The correct answer is choice 2. The sentence in which *relatively* appears is comparing Earth's time scale to the human time scale, so "comparatively" is the correct answer.

3. ○ 2

This is an Inference question asking for an inference that can be supported by paragraph 2. The correct answer choice 2, the Himalayas arc higher than the Caledonian mountains. The paragraph states that younger mountains are general& higher than older mountains. It also states that the Himalayas are much younger than the Caledonians. Since the Himalayas are the younger

range and Lounger mountain ranges are higher- than older ranges, we can infer that the younger Himalayas are higher than the older Caledonians.

Choices 1 and 4 are incorrect because that explicitly contradict the passage. The height of the Himalayas is an indication of their age, and the Himalayas are about the same height that the Caledonians were 400 million years ago. Choice 3 is incorrect because nothing there is nothing in the paragraph about "uniform height."

4. ○ 3

This is a Vocabulary question. The word being tested is *relics*, and it is highlighted in the passage. Choice 3 is the correct answer. The 1.e1ic.s of the Caledonian range are what is left of them. "Remains" means what is left of something, so it is the correct answer.

5. ○ 3

This is a Factual Information question asking for specific information that can be found in paragraph 3. The correct answer is choice 3, mountains are formed by crustal plates hitting each other. The paragraph states that mountains are formed in three ways: by, crustal plates hitting each other, by earthquakes, and by volcanoes. Choices 1,2, and 4 are not among these causes of mountain formation, so they are therefore incorrect.

6. ○ 1

This is a Rhetorical Purpose question. It asks why the author mentions "carbon dioxide" in the passage. This term is highlighted in the passage. The correct answer is choice 1; carbon dioxide is mentioned to explain the origin of a chemical that can erode rocks. The author is describing a particular cause of erosion, and the starting point of that process is carbon dioxide.

7. ○ 2

This is a Vocabulary question. The word being tested is seeps, and it is highlighted in the passage. Choice 2, "Rows slowly," is the correct answer. The sentence is describing the way in which rain moves underground from Earth's surface. It cannot do this by "drying" (choice 1), "freezing" (choice 3), or "warming"(choice 4).

8. ○ 2

This is a Reference question. The word being tested is them, and it is highlighted in the passage. Choice 2, "masses of ice" is the correct answer. This is a simple pronoun-referent item. The word tlze11z refers to the glaciers that are carrying eroded rock. Notice that in this case, a whole series of words separates the pronoun from its referent.

9. ○ 2

This is a Sentence Simplification question. As with all of these items, a

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singlesentence in the passage is highlighted:

Hills and mountains are often regarded as the epitome of permanence: successfully resisting the destructive forces of nature, but in fact they tend to be relatively short-lived in geological terms.

The correct answer is choice 2. That choice contains all of the essential information in the highlighted sentence. it omits the information in the second clause of the highlighted sentence ("successfully resisting the destructive forces of nature") because that information is not essential to the meaning. Choices 1, 3, and 1 are all incorrect because they change the meaning of the highlighted sentence. Choice 1 adds information on the age of a mountain that is not mentioned in the highlighted sentence. Choice 3 introduces information about how long mountains resist forces of nature in absolute terms; the highlighted sentence says that the resistance is relatively short in geological terms, which is an entirely different meaning. Choice 4 compares mountains to other land forms. The highlighted sentence does not make any such comparison.

10. ○ 4

This is a Factual Information question asking for specific information that can be found in paragraph 6. The correct answer is choice 4, "sand." Sentences 3 and 4 of that paragraph describe erosion in dry areas. Sand is carried by wind and bombards rock; this bombardment breaks down the rock, and, as a result, more sand is created. Thus sand is both the cause and the result of erosion, so choice 4 is correct. Glacial activity (choice 1) and tree roots (choice 3) are both

mentioned only as causes of erosion. Rock debris (choice 2) is mentioned only as a result of erosion.

11. ○ 1

This is an Insert Text question. You can see the four black squares in paragraph 6 that represent the possible answer choices here.

Under very cold conditions, rocks can be shattered by ice and frost. Glaciers may form in permanently cold areas, and these slowly moving masses of ice cut out valleys, carrying with them huge quantities of eroded rock debris. ■ *In dry areas the wind is the principal agent of erosion.* ■ *It carries fine particles of sand, which bombard exposed rock surfaces, thereby wearing them into yet more sand.* ■ *Even living things contribute to the formation of landscapes.* ■ *Tree roots force their way into cracks in rocks and, in so doing, speed their splitting. In contrast, the roots of grasses and other small plants may help to hold loose soil fragments together, thereby helping to prevent erosion by the wind.*

The sentence provided, "**Under different climatic conditions, another type of destructive force contributes to erosion,**" is best inserted at square 1.

Square 1 is correct because the inserted sentence is a transitional sentence, moving the discussion away from one set of climatic conditions (cold) to another set of climatic conditions (dryness). It is at square 1 that the transition

between topics takes place.

Squares 2, 3, and 4 all precede sentences that provide details of dry climatic conditions. No transition is taking place at any of those places, so the inserted sentence is not needed.

12. ○Constructive processes: 1, 5, 6

○Destructive processes: 3, 7

This is a Fill in a Table question. It is completed correctly below. The correct choices for the "constructive processes" column are 1, 5, and 6. Choices 3 and 7 are the correct choices for the "destructive processes" column. Choices 2 and 4 should not be used in either column.

参考译文

地理和地貌

大部分人认为自然风景是一成不变的，事实上地球是一个动态的机体，他的外貌在人类文明进程中一直保持着持续缓慢的变化。当然，与大约 4500 亿年前的冰河时代的地貌变化相比，这个进程的确快了很多。主要有两种影响会改变地形：建设性的过程，如产生新的地表特征的地壳隆起；和破坏性的力量，如缓慢清除突出地貌的地表侵蚀。

山峰和山脉因为能够经受得住自然的洗礼，通常被认作是永恒的代名词，但地质学的角度上来说，他们的存在实际上从是相对比较短暂的。一般来说，山峰越高，形成得越晚。例如喜马拉雅山，她只有 50 万年的历史。低矮山峦的历史往往更加久远，它们通常是高耸的山脉崩塌后的遗留物。在大约 400 万年前，当今天的北美和欧洲大陆相结合的时候，加勒多尼亚山脉与现今的喜马拉雅山脉同样雄伟，但是，加勒多尼亚山脉的形成（造山运动）在今天遗留下来的却只是相对非常低矮的格林兰山脉：美国的北阿巴拉契亚山区，苏格兰高地和挪威海岸高原。

地壳分裂成为巨大可移动的板块，板块在柔软的岩石可塑层中漂移。有的时候，这些板块互相冲击并迫使板块边缘的岩石突起，从而形成山脉。在这个过程中，原本形成在海床上的沉积岩可能被拱起高达 26，000 多英尺。在另一种情况下，地震将地壳震裂。产生的岩石堆积形成断块山，从而形成山脉。还有一种情况，活火山带的火山运动也会促使山脉的形成，

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例如北美洲西部的喀斯喀特山脉，他的产生就是由火山岩和火山灰形成的，上面的许多山峰都是死火山。

不论山脉形成的具体原因是什么，一旦陆地高出海平面，都难逃脱被外力摧毁的厄运。裸露的岩石遭受着不断变化天气的攻击，逐渐被碾成碎石块带走，然后形成沉积岩。因此，任何地貌都只是一个短暂的阶段，它所代表的是造山与侵蚀两种力量持续斗争。

多种多样的天气加速了大自然对地貌的侵蚀。雨水冲刷了疏松的土壤并渗入到岩石的缝隙。二氧化碳在空气中与雨水相互作用形成了可以对岩石进行化学腐蚀的弱酸(碳酸)。雨水渗透到地下并能在不久后以泉水的形式流出，那些从岩石间穿过并将碎石从高山带到平原的溪水就是来源于这些泉水。

在严寒的环境下，岩石能被冰霜粉碎。冰川在长期寒冷的区域形成，这些缓慢移动的大量冰块带着大量的腐蚀岩屑阻断了山谷。在干旱地带，风是大自然侵蚀的主要手段。它带着沙子中的微粒冲击着裸露的岩石表面，把岩石吹散成更多的沙粒。动植物们对自然风景的形成也是功不可没，大树植根于岩缝之中，加速了岩石的碎裂。相比之下，草根和其他矮小植物则利于固定土壤，弱化了风蚀作用的影响。

GROUNDWATER

Groundwater is the word used to describe water that saturates the ground, filling all the available spaces. By far the most abundant type of groundwater is meteoric water; this is the groundwater that circulates as part of the water cycle. Ordinary meteoric water is water that has soaked into the ground from the surface, from precipitation (rain and snow) and from lakes and streams. There it remains, sometimes for long periods, before emerging at the surface again. At first thought it seems incredible that there can be enough space in the “solid” ground underfoot to hold all this water.

The necessary space is there, however, in many forms. The commonest spaces are those among the particles—sand grains and tiny pebbles—of loose, unconsolidated sand and gravel. Beds of this material, out of sight beneath the soil, are common. They are found wherever fast rivers carrying loads of coarse sediment once flowed. For example, as the great ice sheets that covered North America during the last ice age steadily melted away, huge volumes of water flowed from them. The water was always laden with pebbles, gravel, and sand, known as glacial outwash, that was deposited as the flow slowed down.

The same thing happens to this day, though on a smaller scale, wherever a sediment-laden river or stream emerges from a mountain valley onto relatively flat land, dropping its load as the current slows: the water usually spreads out fanwise,

depositing the sediment in the form of a smooth, fan-shaped slope. Sediments are also dropped where a river slows on entering a lake or the sea, the deposited sediments are on a lake floor or the seafloor at first, but will be located inland at some future date, when the sea level falls or the land rises; such beds are sometimes thousands of meters thick.

In lowland country almost any spot on the ground may overlie what was once the bed of a river that has since become buried by soil; if they are now below the water's upper surface (the water table), the gravels and sands of the former riverbed, and its sandbars, will be saturated with groundwater.

So much for unconsolidated sediments. Consolidated (or cemented) sediments, too, contain millions of minute water-holding pores. This is because the gaps among the original grains are often not totally plugged with cementing chemicals; also, parts of the original grains may become dissolved by percolating groundwater, either while consolidation is taking place or at any time afterwards. The result is that sandstone, for example, can be as porous as the loose sand from which it was formed.

Thus a proportion of the total volume of any sediment, loose or cemented, consists of empty space. Most crystalline rocks are much more solid; a common exception is basalt, a form of solidified volcanic lava, which is sometimes full of tiny bubbles that make it very porous.

The proportion of empty space in a rock is known as its porosity. But note that porosity is not the same as permeability, which measures the ease with which water can flow through a material; this depends on the sizes of the individual cavities and the crevices linking them.

Much of the water in a sample of water-saturated sediment or rock will drain from it if the sample is put in a suitable dry place. But some will remain, clinging to all solid surfaces. It is held there by the force of surface tension without which water would drain instantly from any wet surface, leaving it totally dry. The total volume of water in the saturated sample must therefore be thought of as consisting of water that can, and water that cannot, drain away.

The relative amount of these two kinds of water varies greatly from one kind of rock or sediment to another, even though their porosities may be the same. What happens depends on pore size. If the pores are large, the water in them will exist as drops too heavy for surface tension to hold, and it will drain away; but if the pores are small enough, the water in them will exist as thin films, too light to overcome the force of surface tension holding them in place; then the water will be firmly held.

Paragraph 1: Groundwater is the word used to describe water that saturates

the ground, filling all the available spaces. By far the most abundant type of groundwater is meteoric water; this is the groundwater that circulates as part of the water cycle. Ordinary meteoric water is water that has soaked into the ground from the surface, from precipitation (rain and snow) and from lakes and streams. There it remains, sometimes for long periods, before emerging at the surface again. At first thought it seems incredible that there can be enough space in the "solid" ground underfoot to hold all this water.

1. Which of the following can be inferred from paragraph 1 about the ground that we walk on?

○It cannot hold rainwater for long periods of time.

○It prevents most groundwater from circulating.

○It has the capacity to store large amounts of water.

○It absorbs most of the water it contains from rivers.

2. The word "incredible" in the passage is closest in meaning to

○Confusing

○Comforting

○Unbelievable

○Interesting

Paragraph 2: The necessary space is there, however, in many forms. The commonest spaces are those among the particles—sand grains and tiny

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pebbles—of loose, unconsolidated sand and gravel. Beds of this material, out of sight beneath the soil, are common. They are found wherever fast rivers carrying loads of coarse sediment once flowed. For example, as the great ice sheets that covered North America during the last ice age steadily melted away, huge volumes of water flowed from them. The water was always laden with pebbles, gravel, and sand, known as glacial outwash, that was deposited as the flow slowed down.

3. The word "out of sight" in the passage is closest in meaning to

○Far away

○Hidden

○Partly visible

○Discovered

4. According to paragraph 2, where is groundwater usually found?

○Inside pieces of sand and gravel

○On top of beds of rock

○In fast rivers that are flowing beneath the soil

○In spaces between pieces of sediment

5. The phrase "glacial outwash" in the passage refers to

○Fast rivers

○Glaciers

○The huge volumes of water created by glacial melting

○The particles carried in water from melting glaciers.

Paragraph 3: The same thing happens to this day, though on a smaller scale, wherever a sediment-laden river or stream emerges from a mountain valley onto relatively flat land, dropping its load as the current slows: the water usually spreads out fanwise, depositing the sediment in the form of a smooth, fan-shaped slope. Sediments are also dropped where a river slows on entering a lake or the sea, the deposited sediments are on a lake floor or the seafloor at first, but will be located inland at some future date, when the sea level falls or the land rises; such beds are sometimes thousands of meters thick.

6. All of the following are mentioned in paragraph 3 as places that sediment-laden rivers can deposit their sediments EXCEPT

○A mountain valley

○Flat land

○A lake floor

○The seafloor

Paragraph 4: In lowland country almost any spot on the ground may overlie what was once the bed of a river that has since become buried by soil; if they are now below the water's upper surface (the water table), the gravels and sands of the former riverbed, and its sandbars, will be saturated with groundwater.

7. The word “overlie” in the passage is closest in meaning to

○Cover

○Change

○Separate

○Surround

Paragraph 5: So much for unconsolidated sediments. Consolidated (or cemented) sediments, too, contain millions of minute water-holding pores. This is because the gaps among the original grains are often not totally plugged with cementing chemicals; also, parts of the original grains may become dissolved by percolating groundwater, either while consolidation is taking place or at any time afterwards. The result is that sandstone, for example, can be as porous as the loose sand from which it was formed.

8. The phrase “so much for” in the passage is closest in meaning to

○That is enough about

○Now let us turn to

○Of greater concern are

○This is related to

9. The word “plugged” in the passage is closet in meaning to

○Washed

○Dragged

○Filled up

○Soaked through

Paragraph 6: Thus a proportion of the total volume of any sediment, loose or cemented, consists of empty space. Most crystalline rocks are much more solid; a common exception is basalt, a form of solidified volcanic lava, which is sometimes full of tiny bubbles that make it very porous.

Paragraph 7: The proportion of empty space in a rock is known as its porosity. But note that porosity is not the same as permeability, which measures the ease with which water can flow through a material; this depends on the sizes of the individual cavities and the crevices linking them.

10. According to paragraphs 6 and 7, why is basalt unlike most crystalline forms of rock?

○It is unusually solid

○It often has high porosity.

○It has a low proportion of empty space.

○It is highly permeable.

11. What is the main purpose of paragraph 7?

○To explain why water can flow through rock

○To emphasize the large amount of empty space in all rock

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○To point out that a rock cannot be both porous and permeable

○To distinguish between two related properties of rock

Paragraph 9: The relative amount of these two kinds of water varies greatly from one kind of rock or sediment to another, even though their porosities may be the same. What happens depends on pore size. If the pores are large, the water in them will exist as drops too heavy for surface tension to hold, and it will drain away; but if the pores are small enough, the water in them will exist as thin films, too light to overcome the force of surface tension holding them in place; then the water will be firmly held.

12. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○Surface tension is not strong enough to retain drops of water in rocks with large pores but it strong enough to hold on to thin films of water in rocks with small pores.

○Water in rocks is held in place by large pores and drains away from small size pores through surface tension.

○Small pores and large pores both interact with surface tension to determine whether a rock will hold water as heavy drops or as a thin film.

○If the force of surface tension is too weak to hold water in place as heavy drops, the water will continue to be held firmly in place as a thin film when large

pores exist.

Paragraph 8: Much of the water in a sample of water-saturated sediment or rock will drain from it if the sample is put in a suitable dry place.■ But some will remain, clinging to all solid surfaces.■ It is held there by the force of surface tension without which water would drain instantly from any wet surface, leaving it totally dry.■ The total volume of water in the saturated sample must therefore be thought of as consisting of water that can, and water that cannot, drain away.■

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

What, then, determines what proportion of the water stays and what proportion drains away?

Where would the sentence best fit? Click on a square to add the sentence to the passage.

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

Much of the ground is actually saturated with water.

●

●

●

Answer choices

○Sediments that hold water were spread by glaciers and are still spread by rivers and streams.

○Water is stored underground in beds of loose sand and gravel or in cemented sediment.

○The size of a saturated rock's pores determines how much water it will retain when the rock is put in a dry place.

○Groundwater often remains underground for a long time before it emerges again.

○Like sandstone, basalt is a crystalline rock that is very porous.

○Beds of unconsolidated sediments are typically located at inland sites that were once underwater.

参考答案

1. ○3
2. ○3
3. ○2
4. ○4
5. ○4
6. ○1
7. ○1
8. ○1
9. ○3
10. ○2
11. ○4
12. ○1
13. ○4
14. ○1, 2, 3

参考译文

地下水

地下水是指渗入到地下并将所有岩石空隙填满的水。到现在为止，雨水是最丰富的地下水资源，是地下水在水循环中的一个环节。普通的雨水会从地表、降水以及湖泊河流侵入到地下。在冒出地表之前，这些地下水有时会长时间留在地下。在我们脚下坚实的土地中竟然有足够的空间储存这些水，这在一开始会让人觉得难以置信。

地下水所需的储存空间多种多样。松散的砂子和砾石间有许多颗粒和小石子，他们之间的空隙是最常见的储存地下水的空间。由这些颗粒组成的水床非常普遍，通常位于看不见的土壤下方，在湍急的河流曾经流过的地方都能找到它们的踪迹。比如，冰河时代覆盖北美的巨大冰层逐渐融化，大量水从那儿流出。水里总会携带些石子、砾石和沙石，这就是所谓的冰河期的冰水沉积，这些颗粒会随着水流的减速而沉淀。

现代也有冰水沉积，尽管规模相对较小。凡是有携带泥沙的河流或者溪流从山谷流至相对平坦的地面时，砂石就随着水流速度的减慢逐渐沉淀；水流通常呈扇形扩散，它们所携带的砂石也会沉淀为光滑的扇形斜面。当河流汇入湖泊和海洋的时候也会有沉淀，这些沉淀最初在湖底或海底，但将来海平面下降或者陆地崛起时，它们就会分布于内陆，通常厚达几千米。

低地区域上的任何位置可能就是曾经的河床，后续被土壤覆盖而变成

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现在的样子。如果那些河床和沙洲现在位于地下水位之下，一定会有大量的地下水浸在它们的沙砾和沙石之间。

以上说的都是松散的沉积物，那些坚固的沉积物，也拥有以数万计的毛细孔来容纳水。因为最初颗粒间的缝隙通常并未完全被粘固的化学物质塞满，而且部分颗粒很可能在固化时或固化后被渗入的地下水溶解；结果这些砂岩最终变得和形成它的散沙一样多孔。

因此，不管沉积物是疏松还是坚固，他们中一定有空间。大部分结晶体岩石都非常坚硬，但也有例外，最常见的就是玄武岩，它是一种固化的火山熔岩，经常充满了微小气泡，从而变得十分多孔。

岩石的多孔性就是指其中空隙的比例。但需要注意的是，多孔性与渗透性是不同的。渗透性衡量的是水渗透物质的难易程度，它取决于与单个空隙以及连接空隙间裂缝的大小。

当充满水分的沉淀物或者岩石样本被放置在适合的干燥环境中时，大部分的水分会流干，但仍有部分水会继续附着在坚实的表面上。要不是因为表面张力，这些水分也会立刻蒸发，仅留下完全干燥的样本。因此，试验样本的含水量既包括可以流干的水，也包括不能流干的水。

这两种水的相对含量因岩石或沉积物种类不同而改变，即便它们有相同比例的空隙，还取决于空隙的大小。如果空隙很大，其中的水会形成水

滴，太重足以克服吸引它的表面张力，就会流走；但如果空隙够小，水会像薄膜一样，太轻无法克服表面张力，从而稳稳地附着在空隙表面上。

THE ORIGINS OF THEATER

In seeking to describe the origins of theater, one must rely primarily on speculation, since there is little concrete evidence on which to draw. The most widely accepted theory, championed by anthropologists in the late nineteenth and early twentieth centuries, envisions theater as emerging out of myth and ritual. The process perceived by these anthropologists may be summarized briefly. During the early stages of its development, a society becomes aware of forces that appear to influence or control its food supply and well-being. Having little understanding of natural causes, it attributes both desirable and undesirable occurrences to supernatural or magical forces, and it searches for means to win the favor of these forces. Perceiving an apparent connection between certain actions performed by the group and the result it desires, the group repeats, refines and formalizes those actions into fixed ceremonies, or rituals.

Stories (myths) may then grow up around a ritual. Frequently the myths include representatives of those supernatural forces that the rites celebrate or hope to influence. Performers may wear costumes and masks to represent the mythical characters or supernatural forces in the rituals or in accompanying celebrations. As a person becomes more sophisticated, its conceptions of supernatural forces and causal relationships may change. As a result, it may abandon or modify some rites. But the myths that have grown up around the rites may continue as part of the group's oral tradition and may even come to be acted out under conditions

divorced from these rites. When this occurs, the first step has been taken toward theater as an autonomous activity, and thereafter entertainment and aesthetic values may gradually replace the former mystical and socially efficacious concerns.

Although origin in ritual has long been the most popular, it is by no means the only theory about how the theater came into being. Storytelling has been proposed as one alternative. Under this theory, relating and listening to stories are seen as fundamental human pleasures. Thus, the recalling of an event (a hunt, battle, or other feat) is elaborated through the narrator's pantomime and impersonation and eventually through each role being assumed by a different person.

A closely related theory sees theater as evolving out of dances that are primarily pantomimic, rhythmical or gymnastic, or from imitations of animal noises and sounds. Admiration for the performer's skill, virtuosity, and grace are seen as motivation for elaborating the activities into fully realized theatrical performances.

In addition to exploring the possible antecedents of theater, scholars have also theorized about the motives that led people to develop theater. Why did theater develop, and why was it valued after it ceased to fulfill the function of ritual? Most answers fall back on the theories about the human mind and basic human needs. One, set forth by Aristotle in the fourth century B.C., sees humans as naturally imitative—as taking pleasure in imitating persons, things, and actions and in

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seeing such imitations. Another, advanced in the twentieth century, suggests that humans have a gift for fantasy, through which they seek to reshape reality into more satisfying forms than those encountered in daily life. Thus, fantasy or fiction (of which drama is one form) permits people to objectify their anxieties and fears, confront them, and fulfill their hopes in fiction if not fact. The theater, then, is one tool whereby people define and understand their world or escape from unpleasant realities.

But neither the human imitative instinct nor a penchant for fantasy by itself leads to an autonomous theater. Therefore, additional explanations are needed. One necessary condition seems to be a somewhat detached view of human problems. For example, one sign of this condition is the appearance of the comic vision, since comedy requires sufficient detachment to view some deviations from social norms as ridiculous rather than as serious threats to the welfare of the entire group. Another condition that contributes to the development of autonomous theater is the emergence of the aesthetic sense. For example, some early societies ceased to consider certain rites essential to their well-being and abandoned them, nevertheless, they retained as parts of their oral tradition the myths that had grown up around the rites and admired them for their artistic qualities rather than for their religious usefulness.

Paragraph 1: In seeking to describe the origins of theater, one must rely

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primarily on speculation, since there is little concrete evidence on which to draw. The most widely accepted theory, championed by anthropologists in the late nineteenth and early twentieth centuries, envisions theater as emerging out of myth and ritual. The process perceived by these anthropologists may be summarized briefly. During the early stages of its development, a society becomes aware of forces that appear to influence or control its food supply and well-being. Having little understanding of natural causes, it attributes both desirable and undesirable occurrences to supernatural or magical forces, and it searches for means to win the favor of these forces. Perceiving an apparent connection between certain actions performed by the group and the result it desires, the group repeats, refines and formalizes those actions into fixed ceremonies, or rituals.

1. The word "championed" in the passage is closest in meaning to

○Changed

○Debated

○Created

○Supported

2. The word "attributes" in the passage is closest in meaning to

○Ascribes

○Leaves

○Limits

○Contrasts

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3. According to paragraph 1, theories of the origins of theater

○Are mainly hypothetical

○Are well supported by factual evidence

○Have rarely been agreed upon by anthropologists

○Were expressed in the early stages of theater's development

4. According to paragraph 1, why did some societies develop and repeat ceremonial actions?

○To establish a positive connection between the members of the society

○To help society members better understand the forces controlling their food supply

○To distinguish their beliefs from those of other societies

○To increase the society's prosperity

Paragraph 2:Stories (myths) may then grow up around a ritual. Frequently the myths include representatives of those supernatural forces that the rites celebrate or hope to influence. Performers may wear costumes and masks to represent the mythical characters or supernatural forces in the rituals or in accompanying celebrations. As a people become more sophisticated, its conceptions of supernatural forces and causal relationships may change. As a result, it may abandon or modify some rites. But the myths that have grown up around the rites may continue as part of the group's oral tradition and may even come to be acted

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out under conditions divorced from these rites. When this occurs, the first step has been taken toward theater as an autonomous activity, and thereafter entertainment and aesthetic values may gradually replace the former mystical and socially efficacious concerns.

5. The word "this" in the passage refers to

○The acting out of rites

○The divorce of ritual performers from the rest of society

○The separation of myths from rites

○The celebration of supernatural forces

6. The word "autonomous" in the passage is closest in meaning to

○Artistic

○Important

○Independent

○Established

7. According to paragraph 2, what may cause societies to abandon certain rites?

○Emphasizing theater as entertainment

○Developing a new understanding of why events occur.

○Finding a more sophisticated way of representing mythical characters

○Moving from a primarily oral tradition to a more written tradition

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Paragraph 5: In addition to exploring the possible antecedents of theater, scholars have also theorized about the motives that led people to develop theater. Why did theater develop, and why was it valued after it ceased to fulfill the function of ritual? Most answers fall back on the theories about the human mind and basic human needs. One, set forth by Aristotle in the fourth century B.C., sees humans as naturally imitative—as taking pleasure in imitating persons, things, and actions and in seeing such imitations. Another, advanced in the twentieth century, suggests that humans have a gift for fantasy, through which they seek to reshape reality into more satisfying forms than those encountered in daily life. Thus, fantasy or fiction (of which drama is one form) permits people to objectify their anxieties and fears, confront them, and fulfill their hopes in fiction if not fact. The theater, then, is one tool whereby people define and understand their world or escape from unpleasant realities.

8. All of following are mentioned in paragraph 5 as possible reasons that led societies to develop theater EXCEPT:

○Theater allows people to face that they are afraid of.

○Theater gives an opportunity to imagine a better reality.

○Theater is a way to enjoy imitating other people.

○Theater provides people the opportunity to better understand the human mind.

9. Which of the following best describes the organization of paragraph 5?

○The author presents two theories for a historical phenomenon.

○The author argues against theories expressed earlier in the passage.

○The author argues for replacing older theories with a new one.

○The author points out problems with two popular theories.

Paragraph 6: But neither the human imitative instinct nor a penchant for fantasy by itself leads to an autonomous theater. Therefore, additional explanations are needed. One necessary condition seems to be a somewhat detached view of human problems. For example, one sign of this condition is the appearance of the comic vision, since comedy requires sufficient detachment to view some deviations from social norms as ridiculous rather than as serious threats to the welfare of the entire group. Another condition that contributes to the development of autonomous theater is the emergence of the aesthetic sense. For example, some early societies ceased to consider certain rites essential to their well-being and abandoned them, nevertheless, they retained as parts of their oral tradition the myths that had grown up around the rites and admired them for their artistic qualities rather than for their religious usefulness.

10. The word "penchant" in the passage is closest in meaning to

○Compromise

○Inclination

○Tradition

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○Respect

11. Why does the author mention "comedy"?

○To give an example of early types of theater

○To explain how theater helps a society respond to threats to its welfare

○To help explain why detachment is needed for the development of theater

○To show how theatrical performers become detached from other members of society.

12. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○A society's rites were more likely to be retained in the oral tradition if its myths were admired for artistic qualities.

○The artistic quality of a myth was sometimes an essential reason for a society to abandon it from the oral tradition.

○Some early societies stopped using myths in their religious practices when rites ceased to be seen as useful for social well-being.

○Myths sometimes survived in a society's tradition because of their artistic qualities even after they were no longer deemed religiously beneficial.

Paragraph 3:■Although origin in ritual has long been the most popular, it is by no means the only theory about how the theater came into being.■Storytelling

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has been proposed as one alternative. ■Under this theory, relating and listening to stories are seen as fundamental human pleasures.■ Thus, the recalling of an event (a hunt, battle, or other feat) is elaborated through the narrator's pantomime and impersonation and eventually through each role being assumed by a different person.

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

To enhance their listener's enjoyment, storytellers continually make their stores more engaging and memorable.

Where would the sentence best fit? Click on a square to add the sentence to the passage.

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

Anthropologists have developed many theories to help understand why and how theater originated.

-
-

●

Answer choices

○The presence of theater in almost all societies is thought to have occurred because early story tellers traveled to different groups to tell their stores.

○Many theorists believe that theater arises when societies act out myths to preserve social well-being.

○The more sophisticated societies became, the better they could influence desirable occurrences through ritualized theater.

○Some theories of theater development focus on how theater was used by group leaders to group leaders govern other members of society.

○Theater may have come from pleasure humans receive from storytelling and moving rhythmically.

○The human capacities for imitation and fantasy are considered possible reasons why societies develop theater.

参考答案：

1. ○4
2. ○1
3. ○1
4. ○4
5. ○3
6. ○3
7. ○2
8. ○4
9. ○1
10. ○2
11. ○3
12. ○4
13. ○4
14. ○2, 5, 6

参考译文

戏剧的起源

由于几乎没有具体材料可供研究，探寻戏剧的起源只能凭推测。19 世纪末 20 世纪初为人类学家们所拥护的一种理论得到了世人的广泛认同；这种观点认为戏剧起源于神话和宗教仪式，这些人类学家们推论过程可简要概括如下：在社会发展早期，人们相信有股力量可以影响甚至操控他们的食物供应和幸福生活。在对自然原因并不十分了解的情况下，他们把希望或不惜希望发生的事情都归咎于超自然的或魔幻的力量，并且试图寻找各种途径赢得这些力量的厚爱。当他们意识到自己的某些行为和期许的结果之间存在明显的联系以后，人们便开始重复并且完善这些行为，最终形成固定的典礼或宗教仪式。

故事（神话）在这种仪式中发展起来，这些故事中经常会有仪式庆祝或期望影响的超自然力量的典型。在这种仪式或伴随的庆典中，表演者们可能会穿上戏装和面具来扮演神秘的角色或超自然力量。当人们认识事物的能力进一步加强的时候，他们对超自然力量以及与其引发的事件间因果关系的认识就发生了改变；于是，他们会抛弃或者修改某些仪式。不过在这些仪式中发展起来的神话故事继续在人们的口头流传，甚至可能脱离了仪式而被演绎着。这时侯，戏剧做为一种自发的活动迈出了自己的第一步，接着，戏剧的娱乐和审美价值开始渐渐取代先前的带有神话色彩的、在社会上灵验的关注。

尽管戏剧起源于宗教仪式的说法是目前最被大众认可的，但无论如何这都不是戏剧起源的唯一理论；另一种推测认为戏剧源于说书。在这个理论中，与故事产生联系和聆听故事被视为是人类基本的乐趣。因此，讲述人通过自己的手势和模仿把对一个事件的回忆（一次打猎、战役或是其它功勋伟业）表现的淋漓尽致，这种方式最终演变成为由不同的人来演绎不同的角色。

另外一种与之相关的理论认为，戏剧主要是从无声的、有节奏的舞蹈、体操，或模仿动物声音的过程逐渐演变而来。人们对表演者的演技、审美能力和优雅的欣赏被视为是表演者将他们的表演精心策划为戏剧的动力。

为了进一步探寻戏剧的起源，一些学派开始从人类发展戏剧的动机上建立理论。为什么戏剧会发展，为什么在戏剧完全脱离宗教仪式以后还有这么大的价值？大部分答案都回到那些关于人类心智和人类基本需求的理论中。首先，亚里士多德在公元前 4 世纪提出，人们天生好模仿，并从模仿他人、事物和动作以及观看模仿中获得乐趣。另外，20 世纪提出的先进理论认为人类擅长幻想，通过幻想将日常生活中的现实重塑成更加令人满意的形式。因此，人们通过幻想或虚构（戏剧的一个形式）把他们的焦虑和恐惧具体化，再通过这种方式面对焦虑和恐惧，并从虚构中满足他们现实中无法实现的愿望。所以，戏剧成为了一种帮助人们认识和理解这个世界，或是帮助人们逃避不满现实的工具。

但是，无论是人类模仿的本能或是对幻想的嗜好本身都不能发展成为

独立的戏剧，因此，我们需要更多解释。一个必要的条件可能是一种要脱离通常人们看待问题的视角。比如，这个条件的一个标志是喜剧构想的出现，因为喜剧要求足够的发散思维，我们需要将社会规范中的离经叛道的行为视作极其荒谬的事情，而不是对公众群体福利的严重威胁。另一个导致戏剧独立的条件是审美感觉的出现。例如，一些早期社会的人们认为有的仪式对他们的幸福生活来说不再是必需品，并且取消了那些仪式。虽然如此，人们还是保留了那些口头传述故事的传统并且热爱从这些仪式里发展起来的神话，出于它们的艺术性，而不是宗教原因。

TIMBERLINE VEGETATION ON MOUNTAINS

The transition from forest to treeless tundra on a mountain slope is often a dramatic one. Within a vertical distance of just a few tens of meters, trees disappear as a life-form and are replaced by low shrubs, herbs, and grasses. This rapid zone of transition is called the upper timberline or tree line. In many semiarid areas there is also a lower timberline where the forest passes into steppe or desert at its lower edge, usually because of a lack of moisture.

The upper timberline, like the snow line, is highest in the tropics and lowest in the Polar Regions. It ranges from sea level in the Polar Regions to 4,500 meters in the dry subtropics and 3,500-4,500 meters in the moist tropics. Timberline trees are normally evergreens, suggesting that these have some advantage over deciduous trees (those that lose their leaves) in the extreme environments of the upper timberline. There are some areas, however, where broadleaf deciduous trees form the timberline. Species of birch, for example, may occur at the timberline in parts of the Himalayas.

At the upper timberline the trees begin to become twisted and deformed. This is particularly true for trees in the middle and upper latitudes, which tend to attain greater heights on ridges, whereas in the tropics the trees reach their greater heights in the valleys. This is because middle- and upper- latitude timberlines are

strongly influenced by the duration and depth of the snow cover. As the snow is deeper and lasts longer in the valleys, trees tend to attain greater heights on the ridges, even though they are more exposed to high-velocity winds and poor, thin soils there. In the tropics, the valleys appear to be more favorable because they are less prone to dry out, they have less frost, and they have deeper soils.

There is still no universally agreed-on explanation for why there should be such a dramatic cessation of tree growth at the upper timberline. Various environmental factors may play a role. Too much snow, for example, can smother trees, and avalanches and snow creep can damage or destroy them. Late-lying snow reduces the effective growing season to the point where seedlings cannot establish themselves. Wind velocity also increases with altitude and may cause serious stress for trees, as is made evident by the deformed shapes at high altitudes. Some scientists have proposed that the presence of increasing levels of ultraviolet light with elevation may play a role, while browsing and grazing animals like the ibex may be another contributing factor. Probably the most important environmental factor is temperature, for if the growing season is too short and temperatures are too low, tree shoots and buds cannot mature sufficiently to survive the winter months.

Above the tree line there is a zone that is generally called alpine tundra. Immediately adjacent to the timberline, the tundra consists of a fairly complete cover of low-lying shrubs, herbs, and grasses, while higher up the number and

diversity of species decrease until there is much bare ground with occasional mosses and lichens and some prostrate cushion plants. Some plants can even survive in favorable microhabitats above the snow line. The highest plants in the world occur at around 6,100 meters on Makalu in the Himalayas. At this great height, rocks, warmed by the sun, melt small snowdrifts.

The most striking characteristic of the plants of the alpine zone is their low growth form. This enables them to avoid the worst rigors of high winds and permits them to make use of the higher temperatures immediately adjacent to the ground surface. In an area where low temperatures are limiting to life, the importance of the additional heat near the surface is crucial. The low growth form can also permit the plants to take advantage of the insulation provided by a winter snow cover. In the equatorial mountains the low growth form is less prevalent.

Paragraph 1: The transition from forest to treeless tundra on a mountain slope is often a dramatic one. Within a vertical distance of just a few tens of meters, trees disappear as a life-form and are replaced by low shrubs, herbs, and grasses. This rapid zone of transition is called the upper timberline or tree line. In many semiarid areas there is also a lower timberline where the forest passes into steppe or desert at its lower edge, usually because of a lack of moisture.

1. The word “dramatic” in the passage is closest in meaning to

○Gradual

○Complex

○Visible

○Striking

2. Where is the lower timberline mentioned in paragraph 1 likely to be found?

○In an area that has little water

○In an area that has little sunlight

○Above a transition area

○On a mountain that has on upper timberline.

3. Which of the following can be inferred from paragraph 1 about both the upper and lower timberlines?

○Both are treeless zones

○Both mark forest boundaries.

○Both are surrounded by desert areas.

○Both suffer from a lack of moisture.

Paragraph 2：The upper timberline, like the snow line, is highest in the tropics and lowest in the Polar Regions. It ranges from sea level in the Polar Regions to 4,500 meters in the dry subtropics and 3,500-4,500 meters in the moist tropics. Timberline trees are normally evergreens, suggesting that these have some advantage over deciduous trees (those that lose their leaves) in the extreme

environments of the upper timberline. There are some areas, however, where broadleaf deciduous trees form the timberline. Species of birch, for example, may occur at the timberline in parts of the Himalayas.

4. Paragraph 2 supports which of the following statements about deciduous trees?

○They cannot grow in cold climates.

○They do not exist at the upper timberline.

○They are less likely than evergreens to survive at the upper timberline.

○They do not require as much moisture as evergreens do.

Paragraph 3：At the upper timberline the trees begin to become twisted and deformed. This is particularly true for trees in the middle and upper latitudes, which tend to attain greater heights on ridges, whereas in the tropics the trees reach their greater heights in the valleys. This is because middle- and upper-latitude timberlines are strongly influenced by the duration and depth of the snow cover. As the snow is deeper and lasts longer in the valleys, trees tend to attain greater heights on the ridges, even though they are more exposed to high-velocity winds and poor, thin soils there. In the tropics, the valleys appear to be more favorable because they are less prone to dry out, they have less frost, and they have deeper soils.

5. The word attain in the passage is closest in meaning to

○require

○resist

○achieve

○endure

6. The word they in the passage refers to

○valleys

○trees

○heights

○ridges

7. The word prone in the passage is closest in meaning to

○adapted

○likely

○difficult

○resistant

8. According to paragraph 3, which of the following is true of trees in the middle and upper latitudes?

○Tree growth is negatively affected by the snow cover in valleys.

○Tree growth is greater in valleys than on ridges.

○Tree growth on ridges is not affected by high-velocity winds.

○Tree growth lasts longer in those latitudes than it does in the tropics.

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Paragraph 4：There is still no universally agreed-on explanation for why there should be such a dramatic cessation of tree growth at the upper timberline. Various environmental factors may play a role. Too much snow, for example, can smother trees, and avalanches and snow creep can damage or destroy them. Late-lying snow reduces the effective growing season to the point where seedlings cannot establish themselves. Wind velocity also increases with altitude and may cause serious stress for trees, as is made evident by the deformed shapes at high altitudes. Some scientists have proposed that the presence of increasing levels of ultraviolet light with elevation may play a role, while browsing and grazing animals like the ibex may be another contributing factor. Probably the most important environmental factor is temperature, for if the growing season is too short and temperatures are too low, tree shoots and buds cannot mature sufficiently to survive the winter months.

9. Which of the sentences below best express the essential information in the highlighted sentence in the passage? In correct choices change the meaning in important ways or leave out essential information.

○Because of their deformed shapes at high altitudes, trees are not likely to be seriously harmed by the strong winds typical of those altitudes.

○As altitude increases, the velocity of winds increase, leading to a serious decrease in the number of trees found at high altitudes.

○The deformed shapes of trees at high altitudes show that wind velocity,

which increase with altitude, can cause serious hardship for trees.

○Increased wind velocity at high altitudes deforms the shapes of trees, and this may cause serious stress for trees.

10. In paragraph 4, what is the author's main purpose in the discussion of the dramatic cessation of tree growth at the upper timberline?

○To argue that none of several environment factors that are believed to contribute to that phenomenon do in fact play a role in causing it.

○To argue in support of one particular explanation of that phenomenon against several competing explanations.

○To explain why the primary environmental factor responsible for that phenomenon has not yet been identified.

○To present several environmental factors that may contribute to a satisfactory explanation of that phenomenon.

Paragraph 6：The most striking characteristic of the plants of the alpine zone is their low growth form. This enables them to avoid the worst rigors of high winds and permits them to make use of the higher temperatures immediately adjacent to the ground surface. In an area where low temperatures are limiting to life, the importance of the additional heat near the surface is crucial. The low growth form can also permit the plants to take advantage of the insulation provided by a winter snow cover. In the equatorial mountains the low growth form is less prevalent.

11. According to paragraph 6, all of the following statements are true of plants in the alpine zone EXCEPT:

○Because they are low, they are less exposed to strong winds.

○Because they are low, the winter snow cover gives them more protection from the extreme cold.

○In the equatorial mountains, they tend to be lower than in mountains elsewhere.

○Their low growth form keeps them closer to the ground, where there is more heat than further up.

Paragraph 5：Above the tree line there is a zone that is generally called alpine tundra. ■Immediately adjacent to the timberline, the tundra consists of a fairly complete cover of low-lying shrubs, herbs, and grasses, while higher up the number and diversity of species decrease until there is much bare ground with occasional mosses and lichens and some prostrate cushion plants.■ Some plants can even survive in favorable microhabitats above the snow line. The highest plants in the world occur at around 6,100 meters on Makalu in the Himalayas.■ At this great height, rocks, warmed by the sun, melt small snowdrifts.■

12. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

This explains how, for example, alpine cushion plants have been found growing at an altitude of 6,180 meters.

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Where would the sentence best fit? Click on a square to add the sentence to the passage.

13. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

At the timberline, whether upper or lower, there is a profound change in the growth of trees and other plants.

●

●

●

Answer choices

○Birch is one of the few species of tree that can survive in the extreme environments of the upper timberline.

○There is no agreement among scientists as to exactly why plant growth is sharply different above and below the upper timberline.

○The temperature at the upper timberline is probably more important in preventing tree growth than factors such as the amount of snowfall or the force of winds.

○The geographical location of an upper timberline has an impact on both

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the types of trees found there and their physical characteristics.

○High levels of ultraviolet light most likely play a greater role in determining tree growth at the upper timberline than do grazing animals such as the ibex.

○Despite being adjacent to the timberline, the alpine tundra is an area where certain kinds of low trees can endure high winds and very low temperatures.

参考答案：

1. ○4

2. ○1

3. ○2

4. ○3

5. ○3

6. ○2

7. ○2

8. ○1

9. ○3

10. ○4

11. ○3

12. ○4

13. ○2, 4, 6

参考译文

山上树带界线的植被

通常从山坡上的森林到没有树的苔原是一种非常戏剧化的转变。在一个垂直距离只有几十米的地方，树木这种生命形式就消失了，取而代之的是低矮的灌木、药草和牧草。这种急速转变的区域被称为上行树带界线或林木线。在许多干旱的地区存在着下行树带界线，在这里由于缺乏水分森林变成干草原，甚至在最下端会出现沙漠。

上行树带界线，比如雪线，在热带最高在极地最低。从极地地区的海平面到干燥亚热带的海拔 4500 米处以及潮湿热带地区的 3500 米至 4500 米处都有上行树带界线。树带界线内通常是常绿树木，他们和处于上行树带界线处极端恶劣环境中生长的落叶树木相比，具有一定的优势。然而，在部分地区也有由落叶阔叶林组成的树带界线。例如，在喜马拉雅的部分地区，桦树就在树带界线上。

上行树带界线的树木开始扭曲和变形，尤其在中高纬度地区的树木，这些地区的树木往往会在山脊上长得更高，而在热带地区的树木则在山谷里长得更高;因为中高纬度地区树带界线受积雪覆盖时间和深度的影响很大。由于山谷中积雪覆盖较厚且持续时间很长，树木往往在山脊上长得更高，即便是生长在大风和贫瘠的土地里。在热带地区山谷更有利于生长，因为山谷不易干涸、很少结霜，并且备有更深的土壤。

目前还没有一个普遍认同的解释来说明为什么会在树带界线上出现树木停止生长这种戏剧化的现象。多种环境因素都起到作用，例如，积雪过多会让树木透不过气，雪崩和雪移能摧毁树木；长时间积雪缩短了有效生长季节的时间，树苗无法生长；另外，风速会随着海拔的升高而增加，增加树木承受的压力，很明显，正是这种风速带来的压力导致树木在高纬度地区变得畸形。一些科学家提出，随着海拔的上升而不断增强的紫外线、野生山羊等动物的放养，都是导致树带界线形成的因素。或许最重要的环境因素是温度，因为如果生长季节太短并且气温太低，树芽和树苗都无法充分成熟度过冬季。

在林木线上有一个称为高山苔原的地区。由于紧挨着树带界线，苔原上都是矮灌木、药材和草地。随着海拔的增加物种的数量和多样性会逐渐减少，直到出现大量空地伴着零星的苔藓和地衣这样的伏地植物。有些植物甚至可以在雪线以上有利的小环境中生存，世界上海拔最高的植物是出现在喜马拉雅山上六千一百米的马卡鲁峰。在这个高度上，被阳光温暖过的岩石可以将小雪堆融化。

高山植物最突出的特点是其低矮的生长形态。这种特点使他们能够抵御最恶劣的强风环境，并且有助于他们利用来自地表的高温。在这样一个低温限制生命的地区，地表提供的额外温度是至关重要的。低矮的生长形态也可以帮助植物充分利用冬季积雪所提供的保温环境。在赤道区的山脉上低矮的生长形态并不常见。

ARCHITECTURE

Architecture is the art and science of designing structures that organize and enclose space for practical and symbolic purposes. Because architecture grows out of human needs and aspirations, it clearly communicates cultural values. Of all the visual arts, architecture affects our lives most directly for it determines the character of the human environment in major ways.

Architecture is a three-dimensional form. It utilizes space, mass, texture, line, light, and color. To be architecture, a building must achieve a working harmony with a variety of elements. Humans instinctively seek structures that will shelter and enhance their way of life. It is the work of architects to create buildings that are not simply constructions but also offer inspiration and delight. Buildings contribute to human life when they provide shelter, enrich space, complement their site, suit the climate, and are economically feasible. The client who pays for the building and defines its function is an important member of the architectural team. The mediocre design of many contemporary buildings can be traced to both clients and architects.

In order for the structure to achieve the size and strength necessary to meet its purpose, architecture employs methods of support that, because they are based on physical laws, have changed little since people first discovered them-even while building materials have changed dramatically. The world's architectural structures

have also been devised in relation to the objective limitations of materials. Structures can be analyzed in terms of how they deal with downward forces created by gravity. They are designed to withstand the forces of compression (pushing together), tension (pulling apart), bending, or a combination of these in different parts of the structure.

Even development in architecture has been the result of major technological changes. Materials and methods of construction are integral parts of the design of architecture structures. In earlier times it was necessary to design structural systems suitable for the materials that were available, such as wood, stone, brick. Today technology has progressed to the point where it is possible to invent new building materials to suit the type of structure desired. Enormous changes in materials and techniques of construction within the last few generations have made it possible to enclose space with much greater ease and speed and with a minimum of material. Progress in this area can be measured by the difference in weight between buildings built now and those of comparable size built one hundred years ago.

Modern architectural forms generally have three separate components comparable to elements of the human body? a supporting skeleton or frame, an outer skin enclosing the interior spaces, equipment, similar to the body's vital organs and systems. The equipment includes plumbing, electrical wiring, hot water, and air-conditioning. Of course in early architecture—such as igloos and adobe

structures—there was no such equipment, and the skeleton and skin were often one.

Much of the world's great architecture has been constructed of stone because of its beauty, permanence, and availability. In the past, whole cities grew from the arduous task of cutting and piling stone upon. Some of the world's finest stone architecture can be seen in the ruins of the ancient Inca city of Machu Picchu high in the eastern Andes Mountains of Peru. The doorways and windows are made possible by placing over the open spaces thick stone beams that support the weight from above. A structural invention had to be made before the physical limitations of stone could be overcome and new architectural forms could be created. That invention was the arch, a curved structure originally made of separate stone or brick segments. The arch was used by the early cultures of the Mediterranean area chiefly for underground drains, but it was the Romans who first developed and used the arch extensively in aboveground structures. Roman builders perfected the semicircular arch made of separate blocks of stone. As a method of spanning space, the arch can support greater weight than a horizontal beam. It works in compression to divert the weight above it out to the sides, where the weight is borne by the vertical elements on either side of the arch. The arch is among the many important structural breakthroughs that have characterized architecture throughout the centuries.

Paragraph 1：Architecture is the art and science of designing structures that organize and enclose space for practical and symbolic purposes. Because architecture grows out of human needs and aspirations, it clearly communicates cultural values. Of all the visual arts, architecture affects our lives most directly for it determines the character of the human environment in major ways.

1. According to paragraph 1, all of the following statements about architecture are true EXCEPT:

○Architecture is visual art.

○Architecture reflects the cultural values of its creators.

○Architecture has both artistic and scientific dimensions.

○Architecture has an indirect effect on life.

Paragraph 2：Architecture is a three-dimensional form. It utilizes space, mass, texture, line, light, and color. To be architecture, a building must achieve a working harmony with a variety of elements. Humans instinctively seek structures that will shelter and enhance their way of life. It is the work of architects to create buildings that are not simply constructions but also offer inspiration and delight. Buildings contribute to human life when they provide shelter, enrich space, complement their site, suit the climate, and are economically feasible. The client who pays for the building and defines its function is an important member of the architectural team. The mediocre design of many contemporary buildings can be traced to both

clients and architects.

2.The word "feasible" in the passage is closet in meaning to

○In existence

○Without question

○Achievable

○Most likely

Paragraph 3：In order for the structure to achieve the size and strength necessary to meet its purpose, architecture employs methods of support that, because they are based on physical laws, have changed little since people first discovered them-even while building materials have changed dramatically. The world's architectural structures have also been devised in relation to the objective limitations of materials. Structures can be analyzed in terms of how they deal with downward forces created by gravity. They are designed to withstand the forces of compression (pushing together), tension (pulling apart), bending, or a combination of these in different parts of the structure.

3. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○Unchanging physical laws have limited the size and strength of buildings that can be made with materials discovered long ago.

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○Building materials have changed in order to increase architectural size and strength, but physical laws of structure have not changed.

○When people first started to build, the structural methods used to provide strength and size were inadequate because they were not based on physical laws.

○Unlike building materials, the methods of support used in architecture have not changed over time because they are based on physical laws.

4. The word "devised" in the passage is closest in meaning to

○Combined

○Created

○Introduced

○Suggested

Paragraph 4：Even development in architecture has been the result of major technological changes. Materials and methods of construction are integral parts of the design of architecture structures. In earlier times it was necessary to design structural systems suitable for the materials that were available, such as wood, stone, brick. Today technology has progressed to the point where it is possible to invent new building materials to suit the type of structure desired. Enormous changes in materials and techniques of construction within the last few generations have made it possible to enclose space with much greater ease and speed and with a minimum of material. Progress in this area can be measured by the difference in weight between buildings built now and those of comparable size

built one hundred ago.

5. The word “integral” is closet in meaning to

○Essential

○Variable

○Practical

○Independent

6. According to paragraph 4, which of the following is true about materials used in the construction of buildings?

○Because new building materials are hard to find, construction techniques have changed very little from past generations.

○The availability of suitable building materials no longer limits the types of structures that may be built.

○The primary building materials that are available today are wood, stone, and brick.

○Architects in earlier times did not have enough building materials to enclose large spaces.

7. In paragraph 4, what does the author imply about modern buildings?

○They occupy much less space than buildings constructed one hundred years ago.

○They are not very different from the building of a few generations ago.

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○They weigh less in relation to their size than buildings constructed one hundred years ago.

○They take a long time to build as a result of their complex construction methods.

Paragraph 5: Modern architectural forms generally have three separate components comparable to elements of the human body; a supporting skeleton or frame, an outer skin enclosing the interior spaces, equipment, similar to the body's vital organs and systems. The equipment includes plumbing, electrical wiring, hot water, and air-conditioning. Of course in early architecture—such as igloos and adobe structures—there was no such equipment, and the skeleton and skin were often one.

8. Which of the following correctly characterizes the relationship between the human body and architecture that is described in paragraph5?

○Complex equipment inside buildings is the one element in modern architecture that resembles a component of the human body.

○The components in early buildings were similar to three particular elements of the human body.

○Modern buildings have components that are as likely to change as the human body is.

○In general, modern buildings more closely resemble the human body than earlier buildings do.

Paragraph 6: Much of the world's great architecture has been constructed of stone because of its beauty, permanence, and availability. In the past, whole cities grew from the arduous task of cutting and piling stone upon. Some of the world's finest stone architecture can be seen in the ruins of the ancient Inca city of Machu Picchu high in the eastern Andes Mountains of Peru. The doorways and windows are made possible by placing over the open spaces thick stone beams that support the weight from above. A structural invention had to be made before the physical limitations of stone could be overcome and new architectural forms could be created. That invention was the arch, a curved structure originally made of separate stone or brick segments. The arch was used by the early cultures of the Mediterranean area chiefly for underground drains, but it was the Romans who first developed and used the arch extensively in aboveground structures. Roman builders perfected the semicircular arch made of separate blocks of stone. As a method of spanning space, the arch can support greater weight than a horizontal beam. It works in compression to divert the weight above it out to the sides, where the weight is borne by the vertical elements on either side of the arch. The arch is among the many important structural breakthroughs that have characterized architecture throughout the centuries.

9. The word "arduous" in the passage is closest in meaning to

○Difficult

○Necessary

○Skilled

○Shared

10. Why does the author include a description of how the "doorways and windows" of Machu Picchu were constructed?

○To indicate that the combined skeletons and skins of the stone buildings of Machu Picchu were similar to igloos and adobe structures

○To indicate the different kinds of stones that had to be cut to build Machu Picchu

○To provide an illustration of the kind of construction that was required before arches were invented

○To explain how ancient builders reduced the amount of time necessary to construct buildings from stone.

11. According to paragraph6, which of the following statements is true of the arch?

○The Romans were the first people to use the stone arch.

○The invention of the arch allowed new architectural forms to be developed.

○The arch worked by distributing the structural of a building toward the center of the arch.

○The Romans followed earlier practices in their use of arches.

Paragraph 5: ■ Modern architectural forms generally have three separate components comparable to elements of the human body; a supporting skeleton or frame, an outer skin enclosing the interior spaces, equipment, similar to the body's vital organs and systems. ■ The equipment includes plumbing, electrical wiring, hot water, and air-conditioning. ■Of course in early architecture—such as igloos and adobe structures—there was no such equipment, and the skeleton and skin were often one. ■

12. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

However, some modern architectural designs, such as those using folded plates of concreter or air-inflated structures, are again unifying skeleton and skin.

Where would the sentence best fit? Click on a square to add the sentence to the passage.

13. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

Architecture uses forms and space to express cultural values.

-
-
-

Answer choices

○Architects seek to create buildings that are both visually appealing and well suited for human use.

○Over the course of the history of building, innovations in material and methods of construction have given architects ever greater freedom to express themselves.

○Throughout history buildings have been constructed like human bodies, needing distinct “organ” systems in order to function.

○Both clients and architects are responsible for the mediocre designs of some modern buildings.

○Modern buildings tend to lack the beauty of ancient stone buildings such as those of Machu Picchu.

○The discovery and use of the arch typifies the way in which architecture advances by developing more efficient types of structures.

参考答案：

1. ○ 4

2. ○ 3

3. ○ 4

4. ○ 2

5. ○ 1

6. ○ 2

7. ○ 3

8. ○ 4

9. ○ 1

10. ○ 3

11. ○ 2

12. ○ 4

13. ○1, 2, 6

参考译文

建筑

建筑是一门设计结构的艺术和科学，出于实用或象征的目的用结构来组织和包围空间。因为建筑源于人类的需求和愿望，同样也可以清楚地传达文化价值。在所有的视觉艺术中，建筑最直接地影响了我们的生活，因为它在很多方面决定了我们生存的环境特征。

建筑是一种利用空间、质量、纹理、线条、光线和颜色的三维立体形式。一幢建筑物必须实现各种要素的和谐搭配。人类本能地希望可以提供居住并且改善他们生活质量的建筑。建筑师们的创造出来的建筑物不单纯的是建筑物，还为人们带来了灵感和喜悦。建筑物为人类的生活提供了遮蔽处和丰富的空间、增加人们的活动场所、完善人们的居所、帮助人们适应气候的变化，同时在经济上也承受。建筑团队中，最重要的是那些为建筑支付建设费用并且设计其职能的人，许多当代建筑平庸的根源在于他们和建筑师。

建筑结构必须达到大小和强度的要求，以实现必要的建筑目的，因此建筑学上采用一些支撑的方法，这些方法都是以物理定律为基础的，尽管建筑材料已经发生了翻天覆地的变化，这些支撑的方法却自人们发现它们以来就鲜有变化。世界的建筑结构也因为克服材料限制的目的而发展起来。建筑师们在设计建筑结构的时候需要将重力对材料的影响考虑在内，通过结构设计使建筑不同部分能抵抗压力、拉力、弯曲力或混合的压力。

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甚至建筑的发展也是由重大的技术变革造成的。材料和建设方法是建筑结构设计整体的组成部分。早期，人们必须设计结构系统来配合当前可用的材料，如木头、石头和砖。现今的技术已经发展到能够创造新的建筑材料来适应想要应用的建筑结构。近几代建筑材料和科技的巨大变化使得包围空间更加简单、快速，并且用更少的材料。在这一领域的进步可以用现在修建的建筑和 100 年前建造的同规模建筑之间的重量差异来衡量。

类似人类的身体结构，现代建筑可以划分为三个独立的部分：支撑骨架或框架、覆盖内部空间的外壳以及像人体内器官一样重要的设施。这些设施包括管道、电线、热水和空调。当然，在早期的圆顶建筑和土坯建筑中并没有这样的设施，皮肤和骨骼也往往是合在一起的。

世界上大多数伟大的建筑都是石料建筑,因为石料建筑不仅外形漂亮、持久耐用，而且石头随处可得。在过去，整个城市的建筑物都是从艰苦的石块切割和堆砌发展起来的。在秘鲁安第斯山脉东部的马丘比丘印加古城遗址，可以看到世界上最棒的石质建筑。在开阔的空间上放置厚石板来支撑上面的石头，使门和窗的修建成为可能。设计师们必须在克服石头的物理限制以及新建筑形式发展之前发明出建筑结构，这就是拱形结构，即最初由分段的石头或砖块构成的弧形结构。拱最初在地中海早期文化中用来建设地下水渠,但古罗马人最先开发和广泛的利用它作为地上建筑的结构，他们完善了由分段的石块组成的半圆形拱。作为跨越空间的一种方式，拱可以比水平横梁支撑更大的重量。它使得其上的压力转移到两侧，由两侧

垂直的部分来承担压力。而拱只是近百年来众多重要建筑结构的突破之一。

Depletion of the Ogallala Aquifer

The vast grasslands of the High Plains in the central United States were settled by farmers and ranchers in the 1880's. This region has a semiarid climate, and for 50 years after its settlement, it supported a low-intensity agricultural economy of cattle ranching and wheat farming. In the early twentieth century, however, it was discovered that much of the High Plains was underlain by a huge aquifer (a rock layer containing large quantities of groundwater). This aquifer was named the Ogallala aquifer after the Ogallala Sioux Indians, who once inhabited the region.

The Ogallala aquifer is a sandstone formation that underlies some 583,000 square kilometers of land extending from northwestern Texas to southern South Dakota. Water from rains and melting snows has been accumulating in the Ogallala for the past 30,000 years. Estimates indicate that the aquifer contains enough water to fill Lake Huron, but unfortunately, under the semiarid climatic conditions that presently exist in the region, rates of addition to the aquifer are minimal, amounting to about half a centimeter a year.

The first wells were drilled into the Ogallala during the drought years of the early 1930's. The ensuing rapid expansion of irrigation agriculture, especially from the 1950's onward, transformed the economy of the region. More than 100,000 wells now tap the Ogallala. Modern irrigation devices, each capable of spraying 4.5

million liters of water a day, have produced a landscape dominated by geometric patterns of circular green islands of crops. Ogallala water has enabled the High Plains region to supply significant amounts of the cotton, sorghum, wheat, and corn grown in the United States. In addition, 40 percent of American grain-fed beef cattle are fattened here.

This unprecedented development of a finite groundwater resource with an almost negligible natural recharge rate—that is, virtually no natural water source to replenish the water supply—has caused water tables in the region to fall drastically. In the 1930's, wells encountered plentiful water at a depth of about 15 meters; currently, they must be dug to depths of 45 to 60 meters or more. In places, the water table is declining at a rate of a meter a year, necessitating the periodic deepening of wells and the use of ever-more-powerful pumps. It is estimated that at current withdrawal rates, much of the aquifer will run dry within 40 years. The situation is most critical in Texas, where the climate is driest, the greatest amount of water is being pumped, and the aquifer contains the least water. It is projected that the remaining Ogallala water will, by the year 2030, support only 35 to 40 percent of the irrigated acreage in Texas that is supported in 1980.

The reaction of farmers to the inevitable depletion of the Ogallala varies. Many have been attempting to conserve water by irrigating less frequently or by switching to crops that require less water. Other, however, have adopted the philosophy that it is best to use the water while it is still economically profitable to

do so and to concentrate on high-value crops such as cotton. The incentive of the farmers who wish to conserve water is reduced by their knowledge that many of their neighbors are profiting by using great amounts of water, and in the process are drawing down the entire region's water supplies.

In the face of the upcoming water supply crisis, a number of grandiose schemes have been developed to transport vast quantities of water by canal or pipeline from the Mississippi, the Missouri, or the Arkansas rivers. Unfortunately, the cost of water obtained through any of these schemes would increase pumping costs at least tenfold, making the cost of irrigated agricultural products from the region uncompetitive on the national and international markets. Somewhat more promising have been recent experiments for releasing capillary water (water in the soil) above the water table by injecting compressed air into the ground. Even if this process proves successful, however, it would almost triple water costs. Genetic engineering also may provide a partial solution, as new strains of drought-resistant crops continue to be developed. Whatever the final answer to the water crisis may be, it is evident that within the High Plains, irrigation water will never again be the abundant, inexpensive resource it was during the agricultural boom years of the mid-twentieth century.

Paragraph 1: The vast grasslands of the High Plains in the central United States were settled by farmers and ranchers in the 1880's. This region has a

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semiarid climate, and for 50 years after its settlement, it supported a low-intensity agricultural economy of cattle ranching and wheat farming. In the early twentieth century, however, it was discovered that much of the High Plains was underlain by a huge aquifer (a rock layer containing large quantities of groundwater). This aquifer was named the Ogallala aquifer after the Ogallala Sioux Indians, who once inhabited the region.

1. According to paragraph 1, which of the following statements about the High Plains is true?

○Until farmers and ranchers settled there in the 1880's, the High Plains had never been inhabited.

○The climate of the High Plains is characterized by higher-than-average temperatures.

○The large aquifer that lies underneath the High Plains was discovered by the Ogallala Sioux Indians.

○Before the early 1900's there was only a small amount of farming and ranching in the High Plains.

Paragraph 2: The Ogallala aquifer is a sandstone formation that underlies some 583,000 square kilometers of land extending from northwestern Texas to southern South Dakota. Water from rains and melting snows has been accumulating in the Ogallala for the past 30,000 years. Estimates indicate that the aquifer contains enough water to fill Lake Huron, but unfortunately, under the

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semiarid climatic conditions that presently exist in the region, rates of addition to the aquifer are minimal, amounting to about half a centimeter a year.

2. According to paragraph 2, all of the following statements about the Ogallala aquifer are true EXCEPT:

○The aquifer stretches from South Dakota to Texas.

○The aquifer's water comes from underground springs.

○Water has been gathering in the aquifer for 30,000 years.

○The aquifer's water is stored in a layer of sandstone.

3. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○Despite the current impressive size of the Ogallala aquifer, the region's climate keeps the rates of water addition very small.

○Although the aquifer has been adding water at the rate of only half a centimeter a year, it will eventually accumulate enough water of fill Lake Huron.

○Because of the region's present climatic conditions, water is being added each year to the aquifer.

○Even when the region experiences unfortunate climatic conditions, the rates of addition of water continue to increase.

Paragraph 3: The first wells were drilled into the Ogallala during the drought

years of the early 1930's. The ensuing rapid expansion of irrigation agriculture, especially from the 1950's onward, transformed the economy of the region. More than 100,000 wells now tap the Ogallala. Modern irrigation devices, each capable of spraying 4.5 million liters of water a day, have produced a landscape dominated by geometric patterns of circular green islands of crops. Ogallala water has enabled the High Plains region to supply significant amounts of the cotton, sorghum, wheat, and corn grown in the United States. In addition, 40 percent of American grain-fed beef cattle are fattened here.

4. The word "ensuing" in the passage is closest in meaning to

○Continuing

○Surprising

○Initial

○Subsequent

5. In paragraph 3, why does the author provide the information that 40 percent of American cattle are fattened in the High Plains?

○To suggest that crop cultivation is not the most important part of the economy of the High Plains

○To indicate that not all economic activity in the High Plains is dependent on irrigation

○To provide another example of how water from the Ogallala has transformed the economy of the High Plains

○To contrast cattle-fattening practices in the High Plains with those used in other region of the United States

Paragraph 4：This unprecedented development of a finite groundwater resource with an almost negligible natural recharge rate—that is, virtually no natural water source to replenish the water supply—has caused water tables in the region to fall drastically. In the 1930's, wells encountered plentiful water at a depth of about 15 meters; currently, they must be dug to depths of 45 to 60 meters or more. In places, the water table is declining at a rate of a meter a year, necessitating the periodic deepening of wells and the use of ever-more-powerful pumps. It is estimated that at current withdrawal rates, much of the aquifer will run dry within 40 years. The situation is most critical in Texas, where the climate is driest, the greatest amount of water is being pumped, and the aquifer contains the least water. It is projected that the remaining Ogallala water will, by the year 2030, support only 35 to 40 percent of the irrigated acreage in Texas that is supported in 1980.

6. The word "unprecedented" in the passage is closest in meaning to

○Difficult to control

○Without any restriction

○Unlike anything in the past

○Rapidly expanding

7. The word “virtually” in the passage is closest in meaning to

○Clearly

○Perhaps

○Frequently

○Almost

8. According to paragraph 4, all of following are consequences of the heavy use of the Ogallala aquifer for irrigation EXCEPT:

○The recharge rate of the aquifer is decreasing.

○Water tables in the region are becoming increasingly lower.

○Wells now have to be dug to much greater depths than before.

○Increasingly powerful pumps are needed to draw water from the aquifer.

9. According to paragraph 4, compared with all other states that use Ogallala water for irrigation, Texas

○Has the greatest amount of farmland being irrigated with Ogallala water

○Contains the largest amount of Ogallala water underneath the soil

○Is expected to face the worst water supply crisis as the Ogallala runs dry

○Uses the least amount of Ogallala water for its irrigation needs

Paragraph 5：The reaction of farmers to the inevitable depletion of the Ogallala varies. Many have been attempting to conserve water by irrigating less frequently or by switching to crops that require less water. Other, however, have

adopted the philosophy that it is best to use the water while it is still economically profitable to do so and to concentrate on high-value crops such as cotton. The incentive of the farmers who wish to conserve water is reduced by their knowledge that many of their neighbors are profiting by using great amounts of water, and in the process are drawing down the entire region's water supplies.

10. The word "inevitable" in the passage is closest in meaning to

○Unfortunate

○Predictable

○Unavoidable

○Final

11. Paragraph 5 mentions which of the following as a source of difficulty for some farmers who try to conserve water?

○Crops that do not need much water are difficult to grow in the High Plains.

○Farmers who grow crops that need a lot of water make higher profits.

○Irrigating less frequently often leads to crop failure.

○Few farmers are convinced that the aquifer will eventually run dry.

Paragraph 6: In the face of the upcoming water supply crisis, a number of grandiose schemes have been developed to transport vast quantities of water by canal or pipeline from the Mississippi, the Missouri, or the Arkansas rivers.

Unfortunately, the cost of water obtained through any of these schemes would increase pumping costs at least tenfold, making the cost of irrigated agricultural products from the region uncompetitive on the national and international markets. Somewhat more promising have been recent experiments for releasing capillary water (water in the soil) above the water table by injecting compressed air into the ground. Even if this process proves successful, however, it would almost triple water costs. Genetic engineering also may provide a partial solution, as new strains of drought-resistant crops continue to be developed. Whatever the final answer to the water crisis may be, it is evident that within the High Plains, irrigation water will never again be the abundant, inexpensive resource it was during the agricultural boom years of the mid-twentieth century.

12. According to paragraph 6, what is the main disadvantage of the proposed plans to transport river water to the High Plains?

○The rivers cannot supply sufficient water for the farmer's needs.

○Increased irrigation costs would make the products too expensive.

○The costs of using capillary water for irrigation will increase.

○Farmers will be forced to switch to genetically engineered crops.

Paragraph 5—6: The reaction of farmers to the inevitable depletion of the Ogallala varies. Many have been attempting to conserve water by irrigating less frequently or by switching to crops that require less water.■ Other, however, have adopted the philosophy that it is best to use the water while it is still economically

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profitable to do so and to concentrate on high-value crops such as cotton.■ The incentive of the farmers who wish to conserve water is reduced by their knowledge that many of their neighbors are profiting by using great amounts of water, and in the process are drawing down the entire region's water supplies.■

In the face of the upcoming water supply crisis, a number of grandiose schemes have been developed to transport vast quantities of water by canal or pipeline from the Mississippi, the Missouri, or the Arkansas rivers. ■Unfortunately, the cost of water obtained through any of these schemes would increase pumping costs at least tenfold, making the cost of irrigated agricultural products from the region uncompetitive on the national and international markets. Somewhat more promising have been recent experiments for releasing capillary water (water in the soil) above the water table by injecting compressed are into the ground. Even if this process proves successful, however, it would almost triple water costs. Genetic engineering also may provide a partial solution, as new strains of drought-resistant crops continue to be developed. Whatever the final answer to the water crisis may be, it is evident that within the High Plains, irrigation water will never again be the abundant, inexpensive resource it was during the agricultural boom years of the mid-twentieth century.

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

But even if uncooperative farmers were to join in the conservation efforts, this would only delay the depletion of the aquifer.

Where would the sentence best fit? Click on a square to add the sentence to the passage.

14．Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

The Ogallala is a large underground source of water in the High Plains region of the United States.

●

●

●

Answer choices

○The use of the Ogallala for irrigation has allowed the High Plains to become one of the most productive agricultural regions in the United States.

○Given the aquifer's low recharge rate, its use for irrigation is causing water tables to drop and will eventually lead to its depletion.

○Releasing capillary water and introducing drought-resistant crops are less-promising solutions to the water supply crisis than bringing in river water

○The periodic deepening of wells and the use of more-powerful pumps would help increase the natural recharge rate of the Ogallala.

○In Texas, a great deal of attention is being paid to genetic engineering

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because it is there that the most critical situation exists.

○Several solutions to the upcoming water supply crisis have been proposed, but none of them promises to keep the costs of irrigation low.

参考答案：

1. ○4
2. ○2
3. ○1
4. ○4
5. ○3
6. ○3
7. ○4
8. ○1
9. ○3
10. ○3
11. ○2
12. ○2
13. ○3
14. ○1, 2, 6

参考译文

奥加拉拉蓄水层的枯竭

19 世纪 80 年代，在美国中部北美大平原的广阔草原上定居着农民和农场主们。这里有着半干旱的气候，在人们定居 50 年后，它支撑了一个以畜牧业和小麦种植为主的低密度农业经济。然而，在 20 世纪初，人们发现北美大平原的大部下面是巨大的蓄水层（含有大量地下水的岩层）。这个蓄水层因曾经在这里定居过的奥加拉拉苏族印第安人而得名，被称作奥加拉拉蓄水层。

奥加拉拉蓄水层属于砂岩结构，在从德克萨斯州西北到南达科塔州的地下绵延了 583000 平方公里。雨水和融雪自 30000 年前便开始在奥加拉拉蓄积。据估计，奥加拉拉蓄水层的含水量足以填满休伦湖，但不幸的是，在目前该地区半干旱的气候条件下，奥加拉拉蓄水层的蓄水能力极低，每年仅半厘米左右。

20 世纪 30 年代初，奥加拉拉正处于干旱时期，人们打出了第一口井。灌溉农业的迅速扩张，特别是 20 世纪 50 年代之后，改变了这一地区的经济。目前人们已经在奥加拉拉地区共开凿了 100000 多口井。日喷水量达到 4500000 升的现代灌溉设备，形成了一个圆形绿岛作物为主的景观。奥加拉拉蓄水层支撑了北美大平原地区美国棉花、高粱、小麦、玉米的灌溉需求。此外，美国百分之四十谷饲养的肉牛在这里被育肥。

考虑到几乎没有补充率（实质上没有自然水资源进行补充），这种有限地下水资源前所未有的发展已经引起了该地区地下水位的急剧下降。在 20 世纪 30 年代，井下 15 米就有丰富的水资源，而现在，必须挖掘到 45 米到 60 米甚至更深的地方才行。有的地方地下水位的下降速度甚至达到了每年 1 米，迫使人们周期性的加深水井并使用更有力的的水泵。按现今的下降速度来估计，大部分地下蓄水将在 40 年内耗尽。这种现象在气候最干旱的德克萨斯州尤为严重。大量的水被从地下抽起，蓄水层含水量最少。据估计，到 2030 年，德克萨斯州余下的奥加拉拉含水只能支持 1980 年灌溉面积的 30%到 40%。

农民们对无法避免的奥加拉拉蓄水层枯竭的反应各不相同。很多人已经开始尝试通过降低灌溉频率或者改种需水较少的庄稼来节约水资源。而另外一些人却抱着趁水资源还能产生经济效益就应抓紧利用的想法，继续种植高价值的棉花等农作物。当那些想节水的农民得知邻居们通过大量耗水的种植而盈利的时候，他们的热情降低了，从而导致了整个区域的供水量的减少。

在即将到来的水资源供应危机面前，人们提出了一些宏伟的供水计划，比如将密西西比河、密苏里河或者阿肯色河的水通过运河或管道运到需要用水的地方。不幸的是，通过以上任何一种方式获得水资源都会将抽水的成本提高十倍以上，进而导致这一地区的灌溉农产品成本在国内和国际市场上都毫无竞争力。最近一些有希望获得成功的试验试图通过向土壤中注

入压力，释放水层上方土壤中的毛细管水。即使这样行之有效，抽水成本会变到原来的三倍。基因工程也会通过继续研发抗旱作物新品种，帮助解决部分难题。无论这次水资源危机的最终结果如何，显然，北美大平原地区灌溉水资源再也不会像 20 世纪中期农业繁荣时期的那样充足并且廉价了。

The Long-Term Stability of Ecosystems

Plant communities assemble themselves flexibly, and their particular structure depends on the specific history of the area. Ecologists use the term “succession” to refer to the changes that happen in plant communities and ecosystems over time. The first community in a succession is called a pioneer community, while the long-lived community at the end of succession is called a climax community. Pioneer and successional plant communities are said to change over periods from 1 to 500 years. These changes—in plant numbers and the mix of species—are cumulative. Climax communities themselves change but over periods of time greater than about 500 years.

An ecologist who studies a pond today may well find it relatively unchanged in a year’s time. Individual fish may be replaced, but the number of fish will tend to be the same from one year to the next. We can say that the properties of an ecosystem are more stable than the individual organisms that compose the ecosystem.

At one time, ecologists believed that species diversity made ecosystems stable. They believed that the greater the diversity the more stable the ecosystem. Support for this idea came from the observation that long-lasting climax communities usually have more complex food webs and more species diversity than pioneer communities. Ecologists concluded that the apparent stability of climax

ecosystems depended on their complexity. To take an extreme example, farmlands dominated by a single crop are so unstable that one year of bad weather or the invasion of a single pest can destroy the entire crop. In contrast, a complex climax community, such as a temperate forest, will tolerate considerable damage from weather to pests.

The question of ecosystem stability is complicated, however. The first problem is that ecologists do not all agree what “stability” means. Stability can be defined as simply lack of change. In that case, the climax community would be considered the most stable, since, by definition, it changes the least over time. Alternatively, stability can be defined as the speed with which an ecosystem returns to a particular form following a major disturbance, such as a fire. This kind of stability is also called resilience. In that case, climax communities would be the most fragile and the least stable, since they can require hundreds of years to return to the climax state.

Even the kind of stability defined as simple lack of change is not always associated with maximum diversity. At least in temperate zones, maximum diversity is often found in mid-successional stages, not in the climax community. Once a redwood forest matures, for example, the kinds of species and the number of individuals growing on the forest floor are reduced. In general, diversity, by itself, does not ensure stability. Mathematical models of ecosystems likewise suggest that diversity does not guarantee ecosystem stability—just the opposite, in

fact. A more complicated system is, in general, more likely than a simple system to break down. A fifteen-speed racing bicycle is more likely to break down than a child's tricycle.

Ecologists are especially interested to know what factors contribute to the resilience of communities because climax communities all over the world are being severely damaged or destroyed by human activities. The destruction caused by the volcanic explosion of Mount St. Helens, in the northwestern United States, for example, pales in comparison to the destruction caused by humans. We need to know what aspects of a community are most important to the community's resistance to destruction, as well as its recovery.

Many ecologists now think that the relative long-term stability of climax communities comes not from diversity but from the "patchiness" of the environment, an environment that varies from place to place supports more kinds of organisms than an environment that is uniform. A local population that goes extinct is quickly replaced by immigrants from an adjacent community. Even if the new population is of a different species, it can approximately fill the niche vacated by the extinct population and keep the food web intact.

Paragraph 1: Plant communities assemble themselves flexibly, and their particular structure depends on the specific history of the area. Ecologists use

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the term “succession” to refer to the changes that happen in plant communities and ecosystems over time. The first community in a succession is called a pioneer community, while the long-lived community at the end of succession is called a climax community. Pioneer and successional plant communities are said to change over periods from 1 to 500 years. These changes—in plant numbers and the mix of species—are cumulative. Climax communities themselves change but over periods of time greater than about 500 years.

1. The word “particular” in the passage is closest in meaning to

○Natural

○Final

○Specific

○Complex

2. According to paragraph 1, which of the following is NOT true of climax communities?

○They occur at the end of a succession.

○They last longer than any other type of community.

○The numbers of plants in them and the mix of species do not change.

○They remain stable for at least 500 years at a time.

Paragraph 2: An ecologist who studies a pond today may well find it relatively unchanged in a year’s time. Individual fish may be replaced, but the number of fish

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will tend to be the same from one year to the next. We can say that the properties of an ecosystem are more stable than the individual organisms that compose the ecosystem.

3. According to paragraph 2, which of the following principles of ecosystems can be learned by studying a pond?

○Ecosystem properties change more slowly than individuals in the system.

○The stability of an ecosystem tends to change as individuals are replaced.

○Individual organisms are stable from one year to the next.

○A change in the members of an organism does not affect an ecosystem's properties

Paragraph 3: At one time, ecologists believed that species diversity made ecosystems stable. They believed that the greater the diversity the more stable the ecosystem. Support for this idea came from the observation that long-lasting climax communities usually have more complex food webs and more species diversity than pioneer communities. Ecologists concluded that the apparent stability of climax ecosystems depended on their complexity. To take an extreme example, farmlands dominated by a single crop are so unstable that one year of bad weather or the invasion of a single pest can destroy the entire crop. In contrast, a complex climax community, such as a temperate forest, will tolerate considerable damage from weather of pests.

4. According to paragraph 3, ecologists once believed that which of the following illustrated the most stable ecosystems?

○Pioneer communities

○Climax communities

○Single-crop farmlands

○Successional plant communities

Paragraph 4: The question of ecosystem stability is complicated, however. The first problem is that ecologists do not all agree what “stability” means. Stability can be defined as simply lack of change. In that case, the climax community would be considered the most stable, since, by definition, it changes the least over time. Alternatively, stability can be defined as the speed with which an ecosystem returns to a particular form following a major disturbance, such as a fire. This kind of stability is also called resilience. In that case, climax communities would be the most fragile and the least stable, since they can require hundreds of years to return to the climax state.

5. According to paragraph 4, why is the question of ecosystem stability complicated?

○The reasons for ecosystem change are not always clear.

○Ecologists often confuse the word “stability” with the word “resilience.”

○The exact meaning of the word “stability” is debated by ecologists.

○There are many different answers to ecological questions.

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6. According to paragraph 4, which of the following is true of climax communities?

○They are more resilient than pioneer communities.

○They can be considered both the most and the least stable communities.

○They are stable because they recover quickly after major disturbances.

○They are the most resilient communities because they change the least over time.

Paragraph 5: Even the kind of stability defined as simple lack of change is not always associated with maximum diversity. At least in temperate zones, maximum diversity is often found in mid-successional stages, not in the climax community. Once a redwood forest matures, for example, the kinds of species and the number of individuals growing on the forest floor are reduced. In general, diversity, by itself, does not ensure stability. Mathematical models of ecosystems likewise suggest that diversity does not guarantee ecosystem stability—just the opposite, in fact. A more complicated system is, in general, more likely than a simple system to break down. (A fifteen-speed racing bicycle is more likely to break down than a child's tricycle.)

7. Which of the following can be inferred from paragraph 5 about redwood forests?

○They become less stable as they mature.

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○They support many species when they reach climax.

○They are found in temperate zones.

○They have reduced diversity during mid-successional stages.

8. The word "guarantee" in the passage is closest in meaning to

○Increase

○Ensure

○Favor

○Complicate

9. In paragraph 5, why does the author provide the information that "(A fifteen-speed racing bicycle is more likely to break down than a child's tricycle)"?

○To illustrate a general principle about the stability of systems by using an everyday example

○To demonstrate that an understanding of stability in ecosystems can be applied to help understand stability in other situations

○To make a comparison that supports the claim that, in general, stability increases with diversity

○To provide an example that contradicts mathematical models of ecosystems

Paragraph 6: Ecologists are especially interested to know what factors contribute to the resilience of communities because climax communities all over

the world are being severely damaged or destroyed by human activities. The destruction caused by the volcanic explosion of Mount St. Helens, in the northwestern United States, for example, pales in comparison to the destruction caused by humans. We need to know what aspects of a community are most important to the community's resistance to destruction, as well as its recovery.

10. The word "pales" in the passage is closest in meaning to

○Increases proportionally

○Differs

○Loses significance

○Is common

Paragraph 7: Many ecologists now think that the relative long-term stability of climax communities comes not from diversity but from the "patchiness" of the environment, an environment that varies from place to place supports more kinds of organisms than an environment that is uniform. A local population that goes extinct is quickly replaced by immigrants from an adjacent community. Even if the new population is of a different species, it can approximately fill the niche vacated by the extinct population and keep the food web intact.

11. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incurred choices change the meaning in important ways or leave out essential information.

○Ecologists now think that the stability of an environment is a result of diversity rather than patchiness.

○Patchy environments that vary from place to place do not often have high species diversity.

○Uniform environments cannot be climax communities because they do not support as many types of organisms as patchy environments.

○A patchy environment is thought to increase stability because it is able to support a wide variety of organisms.

12． The word “adjacent” in the passage is closest in meaning to

○Foreign

○Stable

○Fluid

○Neighboring

Paragraph 6: ■Ecologists are especially interested to know what factors contribute to the resilience of communities because climax communities all over the world are being severely damaged or destroyed by human activities. ■The destruction caused by the volcanic explosion of Mount St. Helens, in the northwestern United States, for example, pales in comparison to the destruction caused by humans. ■We need to know what aspects of a community are most important to the community’s resistance to destruction, as well as its recovery. ■

13． Look at the four squares [■] that indicate where the following sentence could be added to the passage.

In fact, damage to the environment by humans is often much more severe than damage by natural events and processes.

Where would the sentence best fit? Click on a square to add the sentence to the passage.

14．Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

The process of succession and the stability of a climax community can change over time.

●

●

●

Answer choices

○The changes that occur in an ecosystem from the pioneer to the climax community can be seen in one human generation.

○A high degree of species diversity does not always result in a stable ecosystem.

○The level of resilience in a plant community contributes to its long-term stability.

○Ecologists agree that climax communities are the most stable types of ecosystems.

○Disagreements over the meaning of the term “stability” make it difficult to identify the most stable ecosystems.

○The resilience of climax communities makes them resistant to destruction caused by humans.

参考答案：

1. ○3

2. ○3

3. ○1

4. ○2

5. ○3

6. ○2

7. ○3

8. ○2

9. ○1

10. ○3

11. ○4

12. ○4

13. ○2

14. ○2, 3, 5

参考译文

生态系统的长期稳定

植物群体可以自由地聚集，他们特殊的结构取决于聚集区域的具体历史。生态学家使用“演替”来诠释植物群落和生态系统随着时间推移所发生的变化。演替中的第一个群落被称作先锋群落，而处于演替最后那个长期生存的群落被称为顶极群落。先锋群落和紧接着的植物群落的变化周期是从 1 到 500 年不等，植物数量和混合种类数量的变化是慢慢积累的。顶极群落本身也改变，但其变化周期超过 500 年。

现代一个研究池塘的生态学会发现池塘在一年当中相对而言是不变的。个别鱼类可能被替换，但一年一年鱼的总数都趋于一致。也就是说，生态系统自身的性质比组成生态系统的单个生物体更为稳定。

生态学家们一度认为物种的多样性使生态系统稳定，生态系统物种越多样则生态系统越稳定。通过观察得出的结论支持了这个观点，长期持久的顶极群落通常要比先锋群落具备更为复杂的食物网和更多的物种。生态学家家们得出的结论是：顶点生态系统的稳定性明显取决于他们的复杂化程度。举个极端的例子，在单一作物的农田中，一年的恶劣天气或单一害虫的入侵就可以摧毁所有作物。与此相反，在一个复杂的顶极群落里，如温带森林，他们便可以抵御来自气候和害虫的入侵。

不管怎样，生态系统稳定性的问题非常复杂。首先，不是所有的生态

学家都赞同“稳定”的含义。稳定性可以简单地定义为缺乏变化。如果是这样的话，顶极群落将被视为最稳定的，因为根据定义，他们随着时间推移而变化是最少。另外，稳定性也可以界定为生态系统在经历了严重破坏之后回复原貌的速度，比如火灾。这种稳定性也被称作弹性。在这种情况下，顶极群落将是最脆弱和最不稳定的，因为他们可能需要数百年时间才能恢复到顶点状态。

即使是这种被定义为简单地缺乏变化的稳定性并非总是与最多样的物种联系起来。至少在温带地区，会经常在演替过程中发现最多物种，而不是在顶极群落中。例如，红树林一旦成熟，其中的物种数量以及单个物种的数量都会减少。总的来说，多样性本身并不能保证稳定性，生态系统的数学模型也可以得出同样的结论。一般来说，一个更复杂的系统可能比一个简单的系统更容易被破坏（一个十五速的赛车比一个孩子的三轮车更容易损坏）。

生态学家们更想弄清楚到底哪些因素有助于促成群落的恢复，因为世界各地的顶极群落都因为人类活动而遭受到严重的损坏或毁坏。就像美国西北部圣海伦火山的猛烈喷发所造成的破坏，在人类活动对环境造成的的破坏面前也相形见绌。我们必须了解对群落抵抗破坏和恢复来说哪些是最重要的。

现在的很多生态学家们认为，顶极群落相对长期的稳定性并非来于自多样性，而是来自环境的“补缀”，随处变化的环境比统一的环境更有利于

多种有机体的生存。当地物种灭亡后，马上就会被相邻群落的移民取代。即便是另一种不同的物种，他们也可以填补那些已灭绝生物的空缺，并保持食物网的完整。

Opportunists and Competitors

Growth, reproduction, and daily metabolism all require an organism to expend energy. The expenditure of energy is essentially a process of budgeting, just as finances are budgeted. If all of one's money is spent on clothes, there may be none left to buy food or go to the movies. Similarly, a plant or animal cannot squander all its energy on growing a big body if none would be left over for reproduction, for this is the surest way to extinction.

All organisms, therefore, allocate energy to growth, reproduction, maintenance, and storage. No choice is involved; this allocation comes as part of the genetic package from the parents. Maintenance for a given body design of an organism is relatively constant. Storage is important, but ultimately that energy will be used for maintenance, reproduction, or growth. Therefore the principal differences in energy allocation are likely to be between growth and reproduction.

Almost all of an organism's energy can be diverted to reproduction, with very little allocated to building the body. Organisms at this extreme are "opportunists." At the other extreme are "competitors," almost all of whose resources are invested in building a huge body, with a bare minimum allocated to reproduction.

Dandelions are good examples of opportunists. Their seed heads raised just high enough above the ground to catch the wind, the plants are no bigger than they

need be, their stems are hollow, and all the rigidity comes from their water content. Thus, a minimum investment has been made in the body that becomes a platform for seed dispersal. These very short-lived plants reproduce prolifically; that is to say they provide a constant rain of seed in the neighborhood of parent plants. A new plant will spring up wherever a seed falls on a suitable soil surface, but because they do not build big bodies, they cannot compete with other plants for space, water, or sunlight. These plants are termed opportunists because they rely on their seeds' falling into settings where competing plants have been removed by natural processes, such as along an eroding riverbank, on landslips, or where a tree falls and creates a gap in the forest canopy.

Opportunists must constantly invade new areas to compensate for being displaced by more competitive species. Human landscapes of lawns, fields, or flowerbeds provide settings with bare soil and a lack of competitors that are perfect habitats for colonization by opportunists. Hence, many of the strongly opportunistic plants are the common weeds of fields and gardens.

Because each individual is short-lived, the population of an opportunist species is likely to be adversely affected by drought, bad winters, or floods. If their population is tracked through time, it will be seen to be particularly unstable—soaring and plummeting in irregular cycles.

The opposite of an opportunist is a competitor. These organisms tend to have

big bodies, are long-lived, and spend relatively little effort each year on reproduction. An oak tree is a good example of a competitor. A massive oak claims its ground for 200 years or more, outcompeting all other would-be canopy trees by casting a dense shade and drawing up any free water in the soil. The leaves of an oak tree taste foul because they are rich in tannins, a chemical that renders them distasteful or indigestible to many organisms. The tannins are part of the defense mechanism that is essential to longevity. Although oaks produce thousands of acorns, the investment in a crop of acorns is small compared with the energy spent on building leaves, trunk, and roots. Once an oak tree becomes established, it is likely to survive minor cycles of drought and even fire. A population of oaks is likely to be relatively stable through time, and its survival is likely to depend more on its ability to withstand the pressures of competition or predation than on its ability to take advantage of chance events. It should be noted, however, that the pure opportunist or pure competitor is rare in nature, as most species fall between the extremes of a continuum, exhibiting a blend of some opportunistic and some competitive characteristics.

Paragraph 1: Growth, reproduction, and daily metabolism all require an organism to expend energy. The expenditure of energy is essentially a process of budgeting, just as finances are budgeted. If all of one's money is spent on clothes, there may be none left to buy food or go to the movies. Similarly, a plant or animal cannot squander all its energy on growing a big body if none would be left over for

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reproduction, for this is the surest way to extinction.

1. The word squander in the passage is closest in meaning to

○ Extend

○Transform

○ Activate

○ Waste

2. The word none in the passage refers to

○ Food

○ Plant or animal

○ Energy

○ Big body

3. In paragraph 1, the author explains the concept of energy expenditure by

○ Identifying types of organisms that became extinct

○ Comparing the scientific concept to a familiar human experience

○ Arguing that most organisms conserve rather than expend energy

○ Describing the processes of growth, reproduction, and metabolism

Paragraph 3：Almost all of an organism's energy can be diverted to reproduction, with very little allocated to building the body. Organisms at this extreme are "opportunists." At the other extreme are "competitors," almost all of

whose resources are invested in building a huge body, with a bare minimum allocated to reproduction.

4. According to the passage, the classification of organisms as “opportunists” or “competitors” is determined by

○ How the genetic information of an organism is stored and maintained

○ The way in which the organism invests its energy resources

○ Whether the climate in which the organism lives is mild or extreme

○ The variety of natural resources the organism consumes in its environment

Paragraph 4：Dandelions are good examples of opportunists. Their seed heads raised just high enough above the ground to catch the wind, the plants are no bigger than they need be, their stems are hollow, and all the rigidity comes from their water content. Thus, a minimum investment has been made in the body that becomes a platform for seed dispersal. These very short-lived plants reproduce prolifically; that is to say they provide a constant rain of seed in the neighborhood of parent plants. A new plant will spring up wherever a seed falls on a suitable soil surface, but because they do not build big bodies, they cannot compete with other plants for space, water, or sunlight. These plants are termed opportunists because they rely on their seeds’ falling into settings where competing plants have been removed by natural processes, such as along an eroding riverbank, on landslips, or where a tree falls and creates a gap in the forest canopy.

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5. The word dispersal in the passage is closest in meaning to

○Development

○ Growth

○ Distribution

○ Protection

6. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○Because their seeds grow in places where competing plants are no longer present, dandelions are classified as opportunists.

○Dandelions are called opportunists because they contribute to the natural processes of erosion and the creation of gaps in the forest canopy.

○The term opportunists apply to plants whose seeds fall in places where they can compete with the seeds of other plants.

○The term opportunists apply to plants whose falling seeds are removed by natural processes.

Paragraph 7：The opposite of an opportunist is a competitor. These organisms tend to have big bodies, are long-lived, and spend relatively little effort each year on reproduction. An oak tree is a good example of a competitor. A massive oak claims its ground for 200 years or more, outcompeting all other would-be canopy

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trees by casting a dense shade and drawing up any free water in the soil. The leaves of an oak tree taste foul because they are rich in tannins, a chemical that renders them distasteful or indigestible to many organisms. The tannins are part of the defense mechanism that is essential to longevity. Although oaks produce thousands of acorns, the investment in a crop of acorns is small compared with the energy spent on building leaves, trunk, and roots. Once an oak tree becomes established, it is likely to survive minor cycles of drought and even fire. A population of oaks is likely to be relatively stable through time, and its survival is likely to depend more on its ability to withstand the pressures of competition or predation than on its ability to take advantage of chance events. It should be noted, however, that the pure opportunist or pure competitor is rare in nature, as most species fall between the extremes of a continuum, exhibiting a blend of some opportunistic and some competitive characteristics.

7. The word massive in the passage is closest in meaning to

- ○ Huge
- ○ Ancient
- ○ Common
- ○ Successful

8. All of the following are mentioned in paragraph 7 as contributing to the longevity of an oak tree EXCEPT

- ○ The capacity to create shade

○ Leaves containing tannin

○ The ability to withstand mild droughts and fire

○ The large number of acorns the tree produces

9. According to the passage, oak trees are considered competitors because

○ They grow in areas free of opportunists

○ They spend more energy on their leaves, trunks and roots than on their acorns

○ Their population tends to increase or decrease in irregular cycles

○ Unlike other organisms, they do not need much water or sunlight

10. In paragraph 7, the author suggests that most species of organisms

○ Are primarily opportunists

○ Are primarily competitors

○ Begin as opportunists and evolve into competitors

○ Have some characteristics of opportunists and some of competitors

Paragraph 5：Opportunists must constantly invade new areas to compensate for being displaced by more competitive species. Human landscapes of lawns, fields, or flowerbeds provide settings with bare soil and a lack of competitors that are perfect habitats for colonization by opportunists. ■Hence, many of the strongly opportunistic plants are the common weeds of fields and gardens. ■

Because each individual is short-lived, the population of an opportunist

species is likely to be adversely affected by drought, bad winters, or floods. ■If their population is tracked through time, it will be seen to be particularly unstable—soaring and plummeting in irregular cycles. ■

11. Look at the four squares ■ that indicate where the following sentence could be added to the passage.

Such episodic events will cause a population of dandelions, for example, to vary widely.

Where would the sentence best fit?

12. Directions: Complete the table by matching the phrases below

Directions: Select the appropriate phrases from the answer choices and match them to the type of organism to which they relate. TWO of the answer choices will NOT be used. This question is worth 4 points.

Opportunists	Competitors
● ● ● ●	● ● ●

Answer Choices

○Vary frequently the amount of energy they spend in body maintenance

○ Have mechanisms for protecting themselves from predation

○Succeed in locations where other organisms have been removed

○Have relatively short life spans

○Invest energy in the growth of large, strong structures

○Have populations that are unstable in response to climate conditions

○Can rarely find suitable soil for reproduction

○Produce individuals that can withstand changes in the environmental conditions

○Reproduce in large numbers

参考答案：

1. ○4

2. ○3

3. ○2

4. ○2

5. ○3

6. ○1

7. ○1

8. ○4

9. ○2

10.○4

11.○3

12.○Opportunists：3, 4, 6, 9

○Competitors：2, 5, 8

参考译文

机会主义者和竞争者

所有生物都需要通过消耗能量来实现生长、繁殖和每日的新陈代谢。能量的消耗从根本上来说，是一个主体进行能量预算的过程，如同财政预算。如果一个人所有的钱都用来买衣服，可能就没钱购买食物或者看电影了。同样，动植物不能将所有的能量都浪费在生长上，如果他们没有多余的能量用于繁殖，那么它必将走向灭绝。

因此，所有生物体都会将自己的能量进行分配用以生长、繁殖、维系生命和进行储备。它们没有选择，这种分配方式是来自上一代遗传基因的一部分。维系生命对于一个特定生物的身体是相对恒定的。储备很重要，但储备的能量最终都将被用于维系生命、繁殖或者生长。因此，能量分配上的主要不同就在于生长和繁殖之间。

一个生物体所有的能量几乎都可以转用于繁殖，基本没有多少能量被分配用于生长。处于这个极端的生物体被称作“机会主义者”。处于另一个极端的是“竞争者”，“竞争者”几乎将其所有的能量都用于生长一个庞大的身躯，而仅用最低限度的能量进行繁殖。

蒲公英是“机会主义者”典型例子。蒲公英的种子的头部刚好生长到高出地面接触到风的高度，他们的体型也刚好是它们需要的最低尺寸，茎部是中空的，他们通过体内水分来维持自身的硬度。蒲公英对身体最低限度能量的分配，使得他们成为一个散布种子的平台。这些寿命短暂的植物

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大量繁殖；这就是说，他们在母体的周围下一场种子雨。一旦种子落在了适合生长的土壤表面，新的生命体便会会迅速生长，但是，因为他们长成的躯体并不大，因此无法与其他植物竞争空间、水或阳光。这些植物被称为机会主义者，因为他们依靠其种子落入那些竞争者们已经被大自然淘汰了的地方生长而成活，如被侵蚀了的河岸、山崩之处或在由于树木倒下而在森林冠层中形成的空隙处等。

机会主义者必须不断侵入新的领域，以抵消更具竞争力的物种对他们的挤兑。人工草坪、田地或花圃提供的光秃秃的土地，以及没有竞争者的环境是“机会主义者”完美的栖息地。因此，人们田地和花园中常见的杂草多是擅长生长繁殖的机会主义植物。

因为每个个体的寿命短暂，机会主义植物的数量很可能受到干旱、恶劣的冬天天气或者洪水等不利因素的影响。跟踪它们一段时间，就会发现它们的数量特别不稳定，在不规则周期内飙升和暴跌。

与机会主义者相对应的是竞争者。这些生物体往往有拥有庞大的身躯、寿命较长并且每年用在繁殖上面的能量相对较少。橡树是典型的“竞争者”，一颗巨大的橡树占据它的领地长达 200 年甚至更久，通过制造浓密的树荫和吸收土壤中任何多余水分驱逐所有可能的冠层树木。橡树的树叶很难闻，其中富含丹宁酸，它会让很多生物体感到不适或无法消化。丹宁酸是使得树长寿的重要防卫机制的一部分。虽然橡树可以产生数以千计的橡子，但是，它们对大量的橡子投入的能量，和用于树叶、树干和根部生长的能量

相比，简直微乎其微。一旦橡树长成，在短周期的干旱甚至火灾中它都能够轻易存活。橡树的数量在一段时期内似乎是相对稳定的，它的存活可能更多地取决于它善于面对竞争或掠食的压力，并非依赖于利用偶然事件。然而，值得关注的是，单纯机会主义者或竞争者在自然界中是很少见的，大多数的物种都属于这两个极端组成的区域中，同时具有二者的一些特点。

Lascaux Cave Paintings

In Southwest France in the 1940's, playing children discovered Lascaux Grotto, a series of narrow cave chambers that contain huge prehistoric paintings of animals. Many of these beasts are as large as 16 feet (almost 5 meters). Some follow each other in solemn parades, but others swirl about, sideways and upside down. The animals are bulls, wild horses, reindeer, bison, and mammoths outlined with charcoal and painted mostly in reds, yellow, and browns. Scientific analysis reveals that the colors were derived from ocher and other iron oxides ground into a fine powder. Methods of applying color varied: some colors were brushed or smeared on rock surfaces and others were blown or sprayed. It is possible that tubes made from animal bones were used for spraying because hollow bones, some stained with pigment, have been found nearby.

One of the most puzzling aspects of the paintings is their location. Other rock paintings—for example, those of Bushmen in South Africa—are either located near cave entrances or completely in the open. Cave paintings in France and Spain, however, are in recesses and caverns far removed from original cave entrances. This means that artists were forced to work in cramped spaces and without sources of natural light. It also implies that whoever made them did not want them to be easily found. Since cave dwellers normally lived close to entrances, there must have been some reason why so many generations of Lascaux cave dwellers hid their art.

Scholars offer three related but different opinions about the mysterious origin and significance of these paintings. One opinion is that the paintings were a record of seasonal migrations made by herds. Because some paintings were made directly over others, obliterating them, it is probable that a painting's value ended with the migration it pictured. Unfortunately, this explanation fails to explain the hidden locations, unless the migrations were celebrated with secret ceremonies.

Another opinion is that the paintings were directly related to hunting and were an essential part of a special preparation ceremony. This opinion holds that the pictures and whatever ceremony they accompanied were an ancient method of psychologically motivating hunters. It is conceivable that before going hunting the hunters would draw or study pictures of animals and imagine a successful hunt. Considerable support exists for this opinion because several animals in the pictures are wounded by arrows and spears. This opinion also attempts to solve the overpainting by explaining that an animal's picture had no further use after the hunt.

A third opinion takes psychological motivation much further into the realm of tribal ceremonies and mystery: the belief that certain animals assumed mythical significance as ancient ancestors or protectors of a given tribe or clan. Two types of images substantiate this theory: the strange, indecipherable geometric shapes that appear near some animals, and the few drawings of men. Wherever men appear

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they are crudely drawn and their bodies are elongated and rigid. Some men are in a prone position and some have bird or animal heads. Advocates for this opinion point to reports from people who have experienced a trance state, a highly suggestive state of low consciousness between waking and sleeping. Uniformly, these people experienced weightlessness and the sensation that their bodies were being stretched lengthwise. Advocates also point to people who believe that the forces of nature are inhabited by spirits, particularly shamans* who believe that an animal's spirit and energy is transferred to them while in a trance. One Lascaux narrative picture, which shows a man with a birdlike head and a wounded animal, would seem to lend credence to this third opinion, but there is still much that remains unexplained. For example, where is the proof that the man in the picture is a shaman? He could as easily be a hunter wearing a headmask. Many tribal hunters, including some Native Americans, camouflaged themselves by wearing animal heads and hides.

Perhaps so much time has passed that there will never be satisfactory answers to the cave images, but their mystique only adds to their importance. Certainly a great art exists, and by its existence reveals that ancient human beings were not without intelligence, skill, and sensitivity.

Shamans: holy people who act as healers and diviners

Paragraph 1 In Southwest France in the 1940's, playing children discovered Lascaux Grotto, a series of narrow cave chambers that contain huge prehistoric paintings of animals. Many of these beasts are as large as 16 feet (almost 5 meters). Some follow each other in solemn parades, but others swirl about, sideways and upside down. The animals are bulls, wild horses, reindeer, bison, and mammoths outlined with charcoal and painted mostly in reds, yellow, and browns. Scientific analysis reveals that the colors were derived from ocher and other iron oxides ground into a fine powder. Methods of applying color varied: some colors were brushed or smeared on rock surfaces and others were blown or sprayed. It is possible that tubes made from animal bones were used for spraying because hollow bones, some stained with pigment, have been found nearby.

1. The word others in the passage refers to

○Chambers

○Paintings

○Beasts

○Parades

2. The word Methods in the passage is closest in meaning to

○Ways

○Shades

○Stages

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○Rules

3. What are the bones found in the Lascaux caves believed to indicate?

○Wild animals sometimes lived in the cave chambers.

○Artists painted pictures on both walls and bones.

○Artists ground them into a fine powder to make paint.

○Artists developed special techniques for painting the walls.

Paragraph 2：One of the most puzzling aspects of the paintings is their location. Other rock paintings—for example, those of Bushmen in South Africa—are either located near cave entrances or completely in the open. Cave paintings in France and Spain, however, are in recesses and caverns far removed from original cave entrances. This means that artists were forced to work in cramped spaces and without sources of natural light. It also implies that whoever made them did not want them to be easily found. Since cave dwellers normally lived close to entrances, there must have been some reason why so many generations of Lascaux cave dwellers hid their art.

4. Why does the author mention Bushmen in South Africa in paragraph 2?

○To suggest that ancient artists from all over the world painted animals on rocks

○To contrast the location of their rock paintings to those found at Lascaux

○To support the claim that early artists worked in cramped spaces

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○To give an example of other artists who painted in hidden locations

5. What can be inferred from paragraph 2 about cave painters in France and Spain?

○They also painted rocks outside caves.

○They did not live close to the cave entrances.

○They developed their own sources of light to use while painting.

○Their painting practices did not last for many years.

Paragraph 3： Scholars offer three related but different opinions about the mysterious origin and significance of these paintings. One opinion is that the paintings were a record of seasonal migrations made by herds. Because some paintings were made directly over others, obliterating them, it is probable that a painting's value ended with the migration it pictured. Unfortunately, this explanation fails to explain the hidden locations, unless the migrations were celebrated with secret ceremonies.

6. Why does the author mention secret ceremonies?

○To present a common opinion held by many scholars

○To suggest a similarity between two opinions held by scholars

○To suggest a possible explanation for a weakness in an opinion expressed in the passage

○To give evidence that contradicts a major opinion expressed in the passage

Paragraph 4 Another opinion is that the paintings were directly related to hunting and were an essential part of a special preparation ceremony. This opinion holds that the pictures and whatever ceremony they accompanied were an ancient method of psychologically motivating hunters. It is conceivable that before going hunting the hunters would draw or study pictures of animals and imagine a successful hunt. Considerable support exists for this opinion because several animals in the pictures are wounded by arrows and spears. This opinion also attempts to solve the overpainting by explaining that an animal's picture had no further use after the hunt.

7. The word accompanied in the passage is closest in meaning to

○Represented

○Developed into

○Were associated with

○Came after

8. According to paragraph 4, why do some scholars believe that the paintings were related to hunting?

○Because some tools used for painting were also used for hunting

○Because cave inhabitants were known to prefer animal food rather than plant food

○Because some of the animals are shown wounded by weapons

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○Because many hunters were also typically painters

Paragraph 5 A third opinion takes psychological motivation much further into the realm of tribal ceremonies and mystery: the belief that certain animals assumed mythical significance as ancient ancestors or protectors of a given tribe or clan. Two types of images substantiate this theory: the strange, indecipherable geometric shapes that appear near some animals, and the few drawings of men. Wherever men appear they are crudely drawn and their bodies are elongated and rigid. Some men are in a prone position and some have bird or animal heads. Advocates for this opinion point to reports from people who have experienced a trance state, a highly suggestive state of low consciousness between waking and sleeping. Uniformly, these people experienced weightlessness and the sensation that their bodies were being stretched lengthwise. Advocates also point to people who believe that the forces of nature are inhabited by spirits, particularly shamans* who believe that an animal's spirit and energy is transferred to them while in a trance. One Lascaux narrative picture, which shows a man with a birdlike head and a wounded animal, would seem to lend credence to this third opinion, but there is still much that remains unexplained. For example, where is the proof that the man in the picture is a shaman? He could as easily be a hunter wearing a headmask. Many tribal hunters, including some Native Americans, camouflaged themselves by wearing animal heads and hides.

9. According to paragraph 5, why do some scholars refer to a trance state to

help understand the cave paintings?

○To explain the state of consciousness the artists were in when they painted their pictures

○To demonstrate the mythical significance of the strange geometric shapes

○To indicate that trance states were often associated with activities that took place inside caves

○To give a possible reason for the strange appearance of the men painted on the cave walls

10. According to paragraph 5, if the man pictured with the birdlike head is not a shaman, he may have worn the headmask

○to look like an animal while a hunt took place

○to frighten off other hunters competing for food

○to prove that he is not a shaman

○to resist forces of nature thought to be present in animals

Paragraph 6 Perhaps so much time has passed that there will never be satisfactory answers to the cave images, but their mystique only adds to their importance. Certainly a great art exists, and by its existence reveals that ancient human beings were not without intelligence, skill, and sensitivity.

11. According to paragraph 6, why might the puzzling questions about the paintings never be answered?

○Keeping the paintings a mystery will increase their importance.

○The artists hid their tools with great intelligence and skill.

○Too many years have gone by since the images were painted.

○Answering the question is not very important to scholars.

Paragraph 2: One of the most puzzling aspects of the paintings is their location. Other rock paintings—for example, those of Bushmen in South Africa—are either located near cave entrances or completely in the open. ■Cave paintings in France and Spain, however, are in recesses and caverns far removed from original cave entrances. ■This means that artists were forced to work in cramped spaces and without sources of natural light. ■It also implies that whoever made them did not want them to be easily found. ■Since cave dwellers normally lived close to entrances, there must have been some reason why so many generations of Lascaux cave dwellers hid their art.

12. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

This made it easy for the artists to paint and display them for the rest of the cave dwellers.

Where would the sentence best fit?

13. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices

that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

Scholars have wondered about the meaning of the subjects, location, and overpainting of Lascaux cave images.

Answer Choices

○The paintings may have recorded information about animal migrations, and may only have been useful for one migration at a time.

○The human figures represented in the paintings appear to be less carefully shaped than those of animals.

○It is possible that the animals in the paintings were of mythical significance to the tribe, and the paintings reflected an important spiritual practice.

○Unlike painters of the recently discovered paintings, other Lascaux cave painters usually painted on rocks near cave entrances or in open spaces outside the caves.

○Some scholars believe that the paintings motivated hunters by allowing them to picture a successful hunt.

○Scientific analysis suggests that paintings were sprayed onto the rock walls with tubes made from animal bones.

参考答案：

1. ○ 3

2. ○ 1

3. ○ 4

4. ○2

5. ○3

6. ○ 3

7. ○ 3

8. ○ 3

9. ○4

10. ○1

11. ○ 3

12. ○1

13. ○1, 3, 5

参考译文

拉斯科岩洞画

在二十世纪四十年代的法国的西南部，玩耍中的孩子们发现了拉斯科岩洞，一系列狭窄的洞穴室内含有庞大的史前动物题材绘画。其中许多动物有 16 英尺那么大（几乎 5 米）。其中一些动物跟随着彼此庄严地游行，但其它动物在四周和一侧混乱的盘旋着。这些动物包括公牛、野马、驯鹿、野牛和猛犸，它们被木炭勾勒出外形，填上红色、黄色和棕色。科学分析表明，颜色来自黄土和其他氧化铁制成的精细粉末。上色的方法多种多样，岩石表面的颜色有的是涂刷上去的，有的是吹制或喷涂的。喷洒的工具很可能用的是动物骨骼制成的管子，因为在画的附近发现了一些沾有颜料的空心骨骼。

这些绘画中令人费解的问题之一是他们所处的位置。其他岩石画——例如那些南非布希曼人的画——要么靠近洞口，要么完全处于洞口的地方。然而，法国和西班牙的洞穴壁画位于洞穴深处或是远离洞穴最初入口的地方。这意味着艺术家们被强迫在狭窄的缺乏自然光线的空间里工作。这同时暗示着无论是谁画的画，都不希望这些画被轻易的发现。由于穴居人通常住在靠近洞口的地方，一定存在某些原因使得世代的拉斯科岩洞穴居者隐藏着他们的艺术作品。

针对这些画的神秘起源和它们的重要性，学者们提出了三种相关但不同的看法。一种看法认为，这些绘画是牧人用来记录牧群季节性迁徙的。

因为有些画直接画在另一些画上面，把原有画面擦掉了，很有可能是这幅画的价值随着它所描绘迁徙这过程的结束而结束。不幸的是，这一解释未能揭露这些绘画的地点为何如此隐蔽，除非他们是想通过这种秘密的仪式来庆祝牧群迁徙。

另一种观点认为这些画与狩猎有直接关系，他们是一种特别的筹备仪式的重要组成部分。画面及它们所反映各种仪式是一种对猎人进行心理激励的古老方法。试想一下，猎人们狩猎之前，先将猎物画出来或者进行研习，并设想这次狩猎成功。大多数人支持这种观点，因为这些画当中的一些动物被箭和矛击伤。同时，这种观点尝试解释重复绘画的原因：狩猎结束后，之前所绘的猎物图片不再有用。

第三种意见把心理动机上升到部落仪式和神话的层面：他们相信某些动物拥有神秘的重要性,它们是某个特定部落或种族的古老祖先或守护神。两种类型的图像证实这一理论：在动物附近有些奇怪、难以辨别的几何图形和几个男子的图像。无论人类的图像在哪出现，都画得很粗糙并且身体都被拉长和僵化，有的人是俯卧着的，有的人有鸟或动物的头。这个观点的提倡者们提供了一份人类经历昏迷状态的报告，昏迷是一种介于清醒和睡眠之间的低意识的状态。这些人昏迷时都感受到的失重状态和身体被拉长的感觉。而且，那些相信精神存在于自然力量之中的人，特别是巫师，相信动物的精神和能量可以在昏迷状态中获得。一幅拉斯科岩洞画描绘了一个鸟头人和一个受伤动物的故事，这幅画看起来会增加了这种观点的可信度，但仍有很多疑惑尚未揭开。比如，如何证明画中人就是巫师？那个

人可以轻易被看作是一个带着面具的猎人。包括土著美洲人在内的许多部落的猎人，都会通过身着动物的头和兽皮来伪装自己。

或许时间太久，对这些岩洞画解释也可能永远都没有令人满意的答案，但是它们的神秘感会使它们更加重要。当然，一个伟大艺术的存在表明的了古代人类拥有智慧、技术和感情。

Electricity from Wind

Since 1980, the use of wind to produce electricity has been growing rapidly. In 1994 there were nearly 20,000 wind turbines worldwide, most grouped in clusters called wind farms that collectively produced 3,000 megawatts of electricity. Most were in Denmark (which got 3 percent of its electricity from wind turbines) and California (where 17,000 machines produced 1 percent of the state's electricity, enough to meet the residential needs of a city as large as San Francisco). In principle, all the power needs of the United States could be provided by exploiting the wind potential of just three states—North Dakota, South Dakota, and Texas.

Large wind farms can be built in six months to a year and then easily expanded as needed. With a moderate to fairly high net energy yield, these systems emit no heat-trapping carbon dioxide or other air pollutants and need no water for cooling; manufacturing them produces little water pollution. The land under wind turbines can be used for grazing cattle and other purposes, and leasing land for wind turbines can provide extra income for farmers and ranchers.

Wind power has a significant cost advantage over nuclear power and has become competitive with coal-fired power plants in many places. With new technological advances and mass production, projected cost declines should make wind power one of the world's cheapest ways to produce electricity. In the long run, electricity from large wind farms in remote areas might be used to make hydrogen gas from water during periods when there is less than peak demand for electricity. The hydrogen gas could then be fed into a storage system and used to generate electricity when additional or backup power is needed.

Wind power is most economical in areas with steady winds. In areas where the wind dies down, backup electricity from a utility company or from an energy storage system becomes necessary. Backup power could also be provided by linking wind farms with a solar cell, with conventional or pumped-storage hydropower, or with efficient natural-gas-burning turbines. Some drawbacks to wind farms include visual pollution and noise, although these can be overcome by improving their design and locating them in isolated areas.

Large wind farms might also interfere with the flight patterns of migratory birds in certain areas, and they have killed large birds of prey (especially hawks, falcons, and eagles) that prefer to hunt along the same ridge lines that are ideal for wind turbines. The killing of birds of prey by wind turbines has pitted environmentalists who champion wildlife protection against environmentalists who promote renewable wind energy. Researchers are evaluating how serious this problem is and hope to find ways to eliminate or sharply reduce this problem. Some analysts also contend that the number of birds killed by wind turbines is dwarfed by birds killed by other human-related sources and by the potential loss of entire bird species from possible global warming. Recorded deaths of birds of prey and other birds in wind farms in the United States currently amount to no more than 300 per year. By contrast, in the United States an estimated 97 million birds are killed each year when they collide with buildings made of plate glass, 57 million are killed on highways each year; at least 3.8 million die annually from pollution and poisoning; and millions of birds are electrocuted each year by transmission and distribution lines carrying power produced by nuclear and coal power plants.

The technology is in place for a major expansion of wind power worldwide. Wind power is a virtually unlimited source of energy at favorable sites, and even excluding environmentally sensitive areas, the global potential of wind power is much higher than the current world electricity use. In theory, Argentina, Canada, Chile, China, Russia, and the United Kingdom could use wind to meet all of their

energy needs. Wind power experts project that by the middle of the twenty-first century wind power could supply more than 10 percent of the world's electricity and 10-25 percent of the electricity used in the United States.

Paragraph 1: Since 1980, the use of wind to produce electricity has been growing rapidly. In 1994 there were nearly 20,000 wind turbines worldwide, most grouped in clusters called wind farms that collectively produced 3,000 megawatts of electricity. Most were in Denmark (which got 3 percent of its electricity from wind turbines) and California (where 17,000 machines produced 1 percent of the state's electricity, enough to meet the residential needs of a city as large as San Francisco). In principle, all the power needs of the United States could be provided by exploiting the wind potential of just three states—North Dakota, South Dakota, and Texas.

1. Based on the information in paragraph 1, which of the following best explains the term wind farms?

○Farms using windmills to pump water

○Research centers exploring the uses of wind

○Types of power plant common in North Dakota

○Collections of wind turbines producing electric power

Paragraph 2：Large wind farms can be built in six months to a year and then easily expanded as needed. With a moderate to fairly high net energy yield, these systems emit no heat-trapping carbon dioxide or other air pollutants and need no water for cooling; manufacturing them produces little water pollution. The land under wind turbines can be used for grazing cattle and other purposes, and leasing land for wind turbines can provide extra income for farmers and ranchers.

2. The word emit in the passage is closest in meaning to

○Use

○Require

○Release

○Destroy

Paragraph 3: Wind power has a significant cost advantage over nuclear power and has become competitive with coal-fired power plants in many places. With new technological advances and mass production, projected cost declines should make wind power one of the world's cheapest ways to produce electricity. In the long run, electricity from large wind farms in remote areas might be used to make hydrogen gas from water during periods when there is less than peak demand for electricity. The hydrogen gas could then be fed into a storage system and used to generate electricity when additional or backup power is needed.

Paragraph 4: Wind power is most economical in areas with steady winds. In

areas where the wind dies down, backup electricity from a utility company or from an energy storage system becomes necessary. Backup power could also be provided by linking wind farms with a solar cell, with conventional or pumped-storage hydropower, or with efficient natural-gas-burning turbines. Some drawbacks to wind farms include visual pollution and noise, although these can be overcome by improving their design and locating them in isolated areas.

3. Based on the information in paragraph 3 and paragraph 4, what can be inferred about the states of North Dakota, South Dakota, and Texas mentioned at the end of paragraph 1?

○They rely largely on coal-fired power plants.

○They contain remote areas where the winds rarely die down.

○Over 1 percent of the electricity in these states is produced by wind farms.

○Wind farms in these states are being expanded to meet the power needs of the United States.

4. According to paragraph 3, which of the following is true about periods when the demand for electricity is relatively low?

○These periods are times when wind turbines are powered by hydrogen gas.

○These periods provide the opportunity to produce and store energy for future use.

○These periods create storage problems for all forms of power generation.

○These periods occur as often as periods when the demand for electricity is

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high.

5. In paragraph 4, the author states that in areas where winds are not steady

○Power does not reach all customers

○Wind farms cannot be used

○Solar power is more appropriate

○Backup systems are needed

6. According to paragraph 4, what can be inferred about the problems of visual pollution and noise associated with wind farms?

○Both problems affect the efficiency of wind farms.

○Possible solutions are known for both problems.

○Wind power creates more noise than visual pollution.

○People are more concerned about visual pollution than noise.

Paragraph 5: Large wind farms might also interfere with the flight patterns of migratory birds in certain areas, and they have killed large birds of prey (especially hawks, falcons, and eagles) that prefer to hunt along the same ridge lines that are ideal for wind turbines. The killing of birds of prey by wind turbines has pitted environmentalists who champion wildlife protection against environmentalists who promote renewable wind energy. Researchers are evaluating how serious this problem is and hope to find ways to eliminate or sharply reduce this problem. Some analysts also contend that the number of birds killed by wind turbines is

dwarfed by birds killed by other human-related sources and by the potential loss of entire bird species from possible global warming. Recorded deaths of birds of prey and other birds in wind farms in the United States currently amount to no more than 300 per year. By contrast, in the United States an estimated 97 million birds are killed each year when they collide with buildings made of plate glass, 57 million are killed on highways each year; at least 3.8 million die annually from pollution and poisoning; and millions of birds are electrocuted each year by transmission and distribution lines carrying power produced by nuclear and coal power plants.

7. The phrase this problem in the passage refers to

○Interference with the flight patterns of migrating birds in certain areas

○Building ridge lines that are ideal for wind turbines

○The killing of birds of prey by wind turbines

○Meeting the demands of environmentalists who promote renewable wind energy

8. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○Hawks, falcons, and eagles prefer to hunt along ridge lines, where wind turbines can kill large numbers of migratory birds.

○Wind turbines occasionally cause migratory birds to change their flight patterns and therefore may interfere with the areas where birds of prey prefer to

hunt.

○Some of the best locations for large wind farms are places that may cause problems for migrating birds and birds of prey.

○Large wind farms in certain areas kill hawks, falcons, and eagles and thus might create a more ideal path for the flight of migratory birds.

9. In paragraph 5, why does the author give details about the estimated numbers of birds killed each year?

○To argue that wind farms should not be built along ridge lines

○To point out that the deaths of migratory birds exceed the deaths of birds of prey

○To explain why some environmentalists oppose wind energy

○To suggest that wind turbines result in relatively few bird deaths

10. The phrase amount to in the passage is closest in meaning to

○Can identify

○Change

○Are reduced by

○Total

Paragraph 6: The technology is in place for a major expansion of wind power worldwide. Wind power is a virtually unlimited source of energy at favorable sites, and even excluding environmentally sensitive areas, the global potential of wind

power is much higher than the current world electricity use. In theory, Argentina, Canada, Chile, China, Russia, and the United Kingdom could use wind to meet all of their energy needs. Wind power experts project that by the middle of the twenty-first century wind power could supply more than 10 percent of the world's electricity and 10-25 percent of the electricity used in the United States.

11. The word project in the passage is closest in meaning to

○Estimate

○Respond

○Argue

○Plan

12. Which of the following statements most accurately reflects the author's opinion about wind energy?

○Wind energy production should be limited to large wind farms.

○The advantages of wind energy outweigh the disadvantages.

○The technology to make wind energy safe and efficient will not be ready until the middle of the twenty-first century.

○Wind energy will eventually supply many countries with most of their electricity.

Paragraph 1: Since 1980, the use of wind to produce electricity has been growing rapidly. ■In 1994 there were nearly 20,000 wind turbines worldwide,

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most grouped in clusters called wind farms that collectively produced 3,000 megawatts of electricity. ■Most were in Denmark (which got 3 percent of its electricity from wind turbines) and California (where 17,000 machines produced 1 percent of the state's electricity, enough to meet the residential needs of a city as large as San Francisco). ■In principle, all the power needs of the United States could be provided by exploiting the wind potential of just three states—North Dakota, South Dakota, and Texas. ■

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

Some companies in the power industry are aware of this wider possibility and are planning sizable wind-farm projects in states other than California.

Where would the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

In the future, wind power is likely to become a major source of the world's energy supply.

●

Answer Choices

○Wind farms have already produced sufficient amounts of electricity to suggest that wind power could become an important source of electric power.

○Wind power has several advantages, such as low pollution and projected cost declines, compared to other energy sources.

○Responding to environmentalists concerned about birds killed by wind turbines, analysts point to other human developments that are even more dangerous to birds.

○The wind energy produced by just a small number of states could supply all of the power needs of the United States.

○Although wind power is not economical in areas with steady winds, alternative wind sources can be used to simulate wind power.

○Smaller countries, which use less electricity than large countries, are especially suited to use wind power to meet all their energy needs.

参考答案：

1. ○ 4

2. ○ 3

3. ○ 2

4. ○ 2

5. ○4

6. ○ 2

7. ○ 3

8. ○ 3

9. ○4

10. ○4

11. ○1

12. ○2

13. ○4

14. ○1, 2, 3

参考译文

风力发电

风力发电的运用从 1980 年起一直迅猛增长。1994 年，世界各地有近 2 万台风力涡轮机，大量风力涡轮机集中在一起组成风力发电厂，可共同发电 3000 兆瓦。风力发电厂主要集中在丹麦和美国的加利福尼亚州，丹麦全国电力的 3%来源于风力发电，美国加州风力发电厂 17000 台涡轮机的发电量占全州电量的 1%，足以满足旧金山这种大城市的居住用电需求。全美的电力需求基本上都可以通过挖掘北达科他州、南达科他州和得克萨斯州的风力发电潜力来满足。

大型风力发电厂可在 6 个月至一年内建成，后续可根据需要随时扩建。发电厂里的设备在实现大量电能高产的同时，不仅做到了温室气体二氧化碳和其他空气污染物的零排放，并且无需用水对设备进行降温；同时，风力发电基本不会造成水资源污染。风力涡轮机的所在地还可用于放牛等其他用途，农民们和农场主可以通过土地出租供风力发电来增加额外收入。

风力发电和核电站发电相比具有明显的成本优势，在很多地方与燃煤发电也不相上下。随着新技术的进步和大规模生产，预期的成本下降会使风力发电成为世界上成本最低的发电方式。未来，偏远地区的大型风力发电厂发电量高于用电高峰需求量时，多出的电量可能会为从水中制造氢气提供支持。氢气可以存储起来，在需要额外或后备电源时用来发电。

在风源稳定的地区，风力发电是最经济。在风源不足的地方，需要稳定的备用电力来源，如电力公司司、能量储存、太阳能电池、传统水力发电机和抽水蓄能，或者燃烧天然气的高效涡轮机。虽然风力发电会带来视觉污染和噪音,不过这些缺陷都可以通过设计的改善以及地点安排来弥补。

某些区域的大型风力发电厂很可能会影响候鸟的飞行方式，他们杀害了大型猛禽（尤其是老鹰、猎鹰和鹰），这些猛禽喜欢沿那些风力涡轮机所处的理想嵴线捕食。针对风力涡轮机对猛禽造成伤害的这一事实，主张保护野生动物的环保主义者和主张发展再生能源的环保主义者各持己见。研究人员还在对这个问题的严重程度进行评估，他们希望能想办法来消除或着大幅减少这个问题。有的分析家评论认为，由风力涡轮机导致的鸟类的死亡数目和由其他人为原因造成的死亡数目以及整个鸟类可能因全球变暖中而死亡数目相比是少之又少。据记载，美国风力发电厂伤害的猛禽和其他禽鸟的死亡数量每年不超过 300 只。相比之下，在美国估计每年有 9700 万禽鸟由于碰撞到建筑物的厚玻璃板而死亡，5700 万禽鸟死在高速公路上，至少有 380 万禽鸟死于污染和中毒，每年数以百万计的禽鸟在燃煤电厂和核电厂的输电和配电线缆上触电致死。

促使全球范围内风力发电应用扩张的技术已经到位。在合适的地点，风力发电几乎用之不尽取之不竭，即使排除这些环境敏感地区，全球潜在的风力发电量远高于目前的世界耗电总量。理论上来说，阿根廷、加拿大、智利、中国、俄罗斯和英国可以利用风力来满足他们所有的能源需求。风力发电专家估计，在二十一世纪中叶，全球超过 10%的电力，及美国

10-25%的电力需求都可通过风力发电来满足。

Deer Populations of the Puget Sound

Two species of deer have been prevalent in the Puget Sound area of Washington State in the Pacific Northwest of the United States. The black-tailed deer, lowland, west-side cousin of the mule deer of eastern Washington, is now the most common. The other species, the Columbian white-tailed deer, in earlier times was common in the open prairie country, it is now restricted to the low, marshy islands and flood plains along the lower Columbia River.

Nearly any kind of plant of the forest understory can be part of a deer's diet. Where the forest inhibits the growth of grass and other meadow plants, the black-tailed deer browses on huckleberry, salal, dogwood, and almost any other shrub or herb. But this is fair-weather feeding. What keeps the black-tailed deer alive in the harsher seasons of plant decay and dormancy? One compensation for

not hibernating is the built-in urge to migrate. Deer may move from high-elevation browse areas in summer down to the lowland areas in late fall. Even with snow on the ground, the high bushy understory is exposed; also snow and wind bring down leafy branches of cedar, hemlock, red alder, and other arboreal fodder.

The numbers of deer have fluctuated markedly since the entry of Europeans into Puget Sound country. The early explorers and settlers told of abundant deer in the early 1800s and yet almost in the same breath bemoaned the lack of this succulent game animal. Famous explorers of the north American frontier, Lewis and Clark had experienced great difficulty finding game west of the Rockies and not until the second of December did they kill their first elk. To keep 40 people alive that winter, they consumed approximately 150 elk and 20 deer. And when game moved out of the lowlands in early spring, the expedition decided to return east rather than face possible starvation. Later on in the early years of the nineteenth century, when Fort Vancouver became the headquarters of the Hudson's Bay Company, deer populations continued to fluctuate. David Douglas, Scottish botanical explorer of the 1830s found a disturbing change in the animal life around the fort during the period between his first visit in 1825 and his final contact with the fort in 1832. A recent Douglas biographer states:" The deer which once picturesquely dotted the meadows around the fort were gone [in 1832], hunted to extermination in order to protect the crops."

Reduction in numbers of game should have boded ill for their survival in later

times. A worsening of the plight of deer was to be expected as settlers encroached on the land, logging, burning, and clearing, eventually replacing a wilderness landscape with roads, cities, towns, and factories. No doubt the numbers of deer declined still further. Recall the fate of the Columbian white-tailed deer, now in a protected status. But for the black-tailed deer, human pressure has had just the opposite effect. Wild life zoologist Hulmut Buechner(1953), in reviewing the nature of biotic changes in Washington through recorded time, Says that "since the early 1940s, the state has had more deer than at any other time in its history, the winter population fluctuating around approximately 320,000 deer (mule and black-tailed deer), which will yield about 65,000 of either sex and any age annually for an indefinite period."

The causes of this population rebound are consequences of other human actions. First, the major predators of deer---wolves, cougar, and lynx--have been greatly reduced in numbers. Second, conservation has been insured by limiting times for and types of hunting. But the most profound reason for the restoration of high population numbers has been the gate of the forests. Great tracts of lowland country deforested by logging, fire, or both have become ideal feeding grounds of deer. In addition to finding an increase of suitable browse, like huckleberry and vine maple, Arthur Einarsen, longtime game biologist in the Pacific Northwest, found quality of browse in the open areas to be substantially more nutritive. The protein content of shade-grown vegetation, for example, was much lower than that for plants grown in clearings.

Paragraph 1: Two species of deer have been prevalent in the Puget Sound area of Washington state in the Pacific Northwest of the United States. The black-tailed deer, a lowland, west-side cousin of the mule deer of eastern Washington, is now the most common. The other species, the Columbian white-tailed deer, in earlier times was common in the open prairie country, it is now restricted to the low, marshy islands and flood plains along the lower Columbia River.

1. According to paragraph 1, which of the following is true of the white-tailed deer of Puget Sound?

○It is native to lowlands and marshes.

○It is more closely related to the mule deer of eastern Washington than to other types of deer.

○It has replaced the black-tailed deer in the open prairie.

○It no longer lives in a particular type of habitat that it once occupied.

Paragraph 2: Nearly any kind of plant of the forest understory can be part of a deer's diet. Where the forest inhibits the growth of grass and other meadow plants, the black-tailed deer browses on huckleberry, salad, dogwood, and almost any other shrub or herb. But this is fair-weather feeding. What keeps the black-tailed deer alive in the harsher seasons of plant decay and dormancy? One compensation for not hibernating is the built-in urge to migrate. Deer may move from

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high-elevation browse areas in summer down to the lowland areas in late fall. Even with snow on the ground, the high bushy understory is exposed; also snow and wind bring down leafy branches of cedar, hemlock, red alder, and other arboreal fodder.

2. It can be inferred from the discussion in paragraph 2 that winter conditions

- ○ Cause some deer to hibernate
- ○ Make food unavailable in the highlands for deer
- ○ Make it easier for deer to locate understory plants
- ○ Prevent deer from migrating during the winter

3. The word "inhibits" in the passage is closest in meaning to

- ○ Consists of
- ○ Combines
- ○ Restricts
- ○ Establishes

Paragraph 3：The numbers of deer have fluctuated markedly since the entry of Europeans into Puget Sound country. The early explorers and settlers told of abundant deer in the early 1800s and yet almost in the same breath bemoaned the lack of this succulent game animal. Famous explorers of the North American frontier, Lewis and Clark had experienced great difficulty finding game west of the Rockies and not until the second of December did they kill their first elk. To keep

40 people alive that winter, they consumed approximately 150 elk and 20 deer. And when game moved out of the lowlands in early spring, the expedition decided to return east rather than face possible starvation. Later on in the early years of the nineteenth century, when Fort Vancouver became the headquarters of the Hudson's Bay Company, deer populations continued to fluctuate. David Douglas, Scottish botanical explorer of the 1830s. Found a disturbing change in the animal life around the fort during the period between his first visit in 1825 and his final contact with the fort in 1832. A recent Douglas biographer states:" The deer which once picturesquely dotted the meadows around the fort were gone [in 1832], hunted to extermination in order to protect the crops."

4. The phrase "in the same breath" in the passage is closest in meaning to

○ Impatiently

○ Humorously

○ Continuously

○ Immediately

5. The author tells the story of the explorers Lewis and Clark in paragraph 3 in order to illustrate which of the following points?

○The number of deer within the Puget sound region has varied over time.

○ Most of the explorers who came to the Puget sound area were primarily interested than in the West.

○There was more game for hunting in the East of the United States than

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in the West.

○Individual explorers were not as successful at locating games as were the trading companies.

6. According to paragraph 3, how had Fort Vancouver changed by the time David Douglas returned in 1832?

○The fort had become the headquarters for the Hudson's Bay Company.

○Deer had begun populating the meadows around the fort.

○Deer populations near the fort had been destroyed.

○Crop yields in the area around the fort had decreased.

Paragraph 4：Reduction in numbers of game should have boded ill for their survival in later times. A worsening of the plight of deer was to be expected as settlers encroached on the land, logging, burning, and clearing, eventually replacing a wilderness landscape with roads, cities, towns, and factories. No doubt the numbers of deer declined still further. Recall the fate of the Columbian white-tailed deer, now in a protected status. But for the black-tailed deer, human pressure has had just the opposite effect. Wild life zoologist Hulmut Buechner(1953), in reviewing the nature of biotic changes in Washington through recorded time, Says that "since the early 1940s, the state has had more deer than at any other time in its history, the winter population fluctuating around approximately 320,000 deer (mule and black-tailed deer), which will yield about 65,000 of either sex and any age annually for an indefinite period."

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7. Why does the author ask readers to recall "the fate of the Columbian white-tailed deer" in the discussion of changes in the wilderness landscape?

○To provide support for the idea that habitat destruction would lead to population decline

○To compare how two species of deer caused biotic changes in the wilderness environment

○To provide an example of a species of deer that has successfully adapted to human settlement

○To argue that some deer species must be given a protected status

8. The phrase "indefinite period" in the passage is closest in meaning to period

○ Whose end has not been determined

○ That does not begin when expected

○ That lasts only briefly

○ Whose importance remains unknown

9. Which of the following statements about deer populations is supported by the information in paragraph 4?

○Deer populations reached their highest point during the 1940s and then began to decline.

○The activities of settlers contributed in unexpected ways to the growth of some deer populations in later times.

○The cleaning of wilderness land for construction caused biotic changes from which the black-tailed deer population has never recovered.

○Since the 1940s the winter populations of deer have fluctuated more than the summer populations have.

Paragraph 5：The causes of this population rebound are consequences of other human actions. First, the major predators of deer---wolves, cougar, and lynx--have been greatly reduced in numbers. Second, conservation has been insured by limiting times for and types of hunting. But the most profound reason for the restoration of high population numbers has been the gate of the forests. Great tracts of lowland country deforested by logging, fire, or both have become ideal feeding grounds of deer. In addition to finding an increase of suitable browse, like huckleberry and vine maple, Arthur Einarsen, longtime game biologist in the Pacific Northwest, found quality of browse in the open areas to be substantially more nutritive. The protein content of shade-grown vegetation, for example, was much lower than that for plants grown in clearings.

10． The word “rebound” in the passage is closest in meaning to

○ Decline

○ Recovery

○ Exchange

○ Movement

11． Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○Arthur Einarsen's longtime family with the Pacific Northwest helped him discover areas where deer had an increase in suitable browse.

○Arthur Einarsen found that deforested feeding grounds provided deer with more and better food.

○Biologist like Einarsen believe it is important to find additional open areas with suitable browse for deer to inhabit.

○According to Einarsen, huckleberry and vine maple are examples of vegetation that may someday improve the nutrition of deer in the open areas of the Pacific Northwest.

12． Which of the following is NOT mentioned in paragraph 5 as a factor that has increased deer populations?

○A reduction in the number of predators

○Restrictions on hunting

○The effects of logging and fire

○Laws that protected feeding grounds of deer

Paragraph 2—3: Nearly any kind of plant of the forest understory can be part of a deer's diet. Where the forest inhibits the growth of grass and other meadow plants, the black-tailed deer browses on huckleberry, salad, dogwood, and almost

any other shrub or herb. But this is fair-weather feeding. What keeps the black-tailed deer a lived in the harsher seasons of plant decay and dormancy? One compensation for not hibernating is the built- in urge to migrate. ■ Deer may move from high-elevation browse areas in summer down to the lowland areas in late fall. ■ Even with snow on the ground, the high bushy understory is exposed; also snow and wind bring down leafy branches of cedar, hemlock, red alder, and other arboreal fodder.

■The numbers of deer have fluctuated markedly since the entry of Europeans into Puget Sound country. ■ The early explorers and settlers told of abundant deer in the early 1800s and yet almost in the same breath bemoaned the lack of this succulent game animal. Famous explorers of the north American frontier, Lewis and had experienced great difficulty finding game west of the Rockies and not until the second of December did they kill their first elk. To keep 40 people alive that winter, they consumed approximately 150 elk and 20 deer. And when game moved out of the lowlands in early spring, the expedition decided to return east rather than face possible starvation. Later on in the early years of the nineteenth century, when Fort Vancouver became the headquarters of the Hudson's Bay Company, deer populations continued to fluctuate. David Douglas, Scottish botanical explorer of the 1830s. Found a disturbing change in the animal life around the fort during the period between his first visit in 1825 and his final contact with the fort in 1832. A recent Douglas biographer states:" The deer which once picturesquely dotted the meadows around the fort were gone [in 1832], hunted to extermination in order to protect the crops."

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13． Look at the four squares [■] that indicate where the following sentence could be added to the passage.

There food is available and accessible throughout the winter.

Where would the sentence best fit?

14．Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

Deer in the Puget Sound area eat a wide variety of foods and migrate seasonally food

●

●

●

Answer Choices

○ The balance of deer species in the Puget Sound region has changed over time, with the Columbian white-tailed deer now outnumbering other types of deer.

○ Deer populations naturally fluctuate, but early settlers in the Puget Sound environment caused an overall decline in the deer populations of the areas at that time.

○ In the long term, black-tailed deer in the Puget Sound area have benefitted from human activities through the elimination of their natural predators, and more and better food in deforested areas.

○ Because Puget Sound deer migrate, it was and still remains difficult to determine accurately how many deers are living at any one time the western United States.

○ Although it was believed that human settlement of American West would cause the total number of deer to decrease permanently, the opposite has occurred for certain types of deer.

○ Wildlife biologists have long been concerned that the loss of forests may create nutritional deficiencies for deer.

参考答案：

1. ○4

2. ○ 2

3. ○ 3

4. ○4

5. ○1

6. ○3

7. ○1

8. ○ 1

9. ○2

10. ○ 2

11. ○2

12. ○4

13. ○2

14. ○2, 3, 5

参考译文

普吉特海湾的鹿群

在太平洋西北区的美国华盛顿州，有两种鹿在普吉特海湾非常普遍。黑尾鹿是华盛顿东部杂交鹿在西部的表亲，它们生活在低地。另一种哥伦比亚白尾鹿，从前在开阔的草原上很常见，而现在只能在低矮的沼泽岛屿地带和哥伦比亚河下游的河滩地区才能看到它们。

森林里，几乎任何植物都是鹿的食物。在森林抑制草和其它草地植物生长的地方，黑尾鹿可以吃越橘、北美白珠树、多花栋木和其他几乎所有灌木和草；但这些只能在好天气里才能吃得到；在植物衰败、隐匿的严寒季节，黑尾鹿们是如何过冬的呢？避免冬眠的一种方法就是天生的迁徙习性。它们会在夏天迁徙到高海拔觅食区直到秋天结束再回到低地。即便地面还有残雪，高的灌木也会露出来；风雪天气会把雪松、铁衫、红桤木和其它乔木多叶的树枝带下来。

自从欧洲人进入了普吉特海湾，鹿群的数量发生了显著的变化。早期的探险家和殖民者说起在十九世纪早期那儿有大量的鹿群，与此同时惋惜现在这种诱人动物的稀少。著名的北美探险先驱者刘易斯和克拉克在落基山西部经历种种困难，并且直到第二年十二月他们才杀死了第一只麋鹿。为了让 40 人在冬天里存活，他们消耗了 150 只麋鹿和 20 只小鹿。当猎物在早春时期迁徙出了低地，远征队决定返回东部而不是去面对潜在的饥饿。此后在十九世纪最初几年里，温哥华堡成为哈德逊湾公司的总部，鹿的数

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量持续波动。十九世纪三十年代，苏格兰植物学探险家大卫·道格拉斯发现了他在1825年第一次的探访和1832年的最后接触之间出现在温哥华堡附近令人不安的变化。在道格拉斯近期的传记中陈述到：在 1832 年曾经如画般分布在温哥华堡附近草地上的鹿群已经消失了，为了保护农作物猎杀致灭绝。

鹿群数量的减少预示了它们今后生存的艰辛。鹿群的处境正在恶化，它们能期待的却是殖民者入侵它们的领地，人类在他们生活的土地上进行采伐、焚烧，清除障碍，最终将荒野风景变成公路、城市、城镇和工厂。毋庸置疑，鹿群的数量进一步减少。回想起来，哥伦比亚白尾鹿的命运，现在已经处于被保护状态。而对黑尾鹿来说，人类的压力反而产生了相反的效果。野生动物学家赫尔穆特·布希纳（1953）通过已有记录评论了华盛顿地区生物的自然变化，他说：二十世纪 40 年代早期，美国拥有比以往任何历史时期都多的鹿群，鹿群冬季的数量在接近 320000 只鹿（杂交和黑尾鹿）左右波动，在此之后的每一年不同年龄段的公鹿和母鹿数量分别会增加至 65000 只。

这种鹿群数量的反弹是由于人类其他活动造成。首先，狼、美洲豹和山猫等鹿群的主要猎食者急剧减少。其次，通过限制捕猎时间和捕猎种类来保护鹿群。但鹿群数量恢复的主要原因在于森林减少。大部分的低地的树木被砍伐、焚烧，进而成为了鹿群理想的生活场地。以便他们去寻找更适合的嫩叶，比如越橘类和枫叶。太平洋西北的生物学家亚瑟·埃纳森发现在空旷地区的高质量的嫩叶大部分都是很有营养的，就像在遮蔽中生长

的植物，他们所包含的蛋白质比那些在空旷地区生长的植物蛋白质更低。

Cave Art in Europe

The earliest discovered traces of art are beads and carvings, and then paintings, from sites dating back to the Upper Paleolithic period. We might expect that early artistic efforts would be crude, but the cave paintings of Spain and southern France show a marked degree of skill. So do the naturalistic paintings on slabs of stone excavated in southern Africa. Some of those slabs appear to have been painted as much as 28,000 years ago, which suggests that painting in Africa is as old as painting in Europe. But painting may be even older than that. The early Australians may have painted on the walls of rock shelters and cliff faces at least 30,000 years ago, and maybe as much as 60,000 years ago.

The researchers Peter Ucko and Andree Rosenfeld identified three principal

locations of paintings in the caves of western Europe: (1) in obviously inhabited rock shelters and cave entrances; (2) in galleries immediately off the inhabited areas of caves; and (3) in the inner reaches of caves, whose difficulty of access has been interpreted by some as a sign that magical-religious activities were performed there.

The subjects of the paintings are mostly animals. The paintings rest on bare walls, with no backdrops or environmental trappings. Perhaps, like many contemporary peoples, Upper Paleolithic men and women believed that the drawing of a human image could cause death or injury, and if that were indeed their belief, it might explain why human figures are rarely depicted in cave art. Another explanation for the focus on animals might be that these people sought to improve their luck at hunting. This theory is suggested by evidence of chips in the painted figures, perhaps made by spears thrown at the drawings. But if improving their hunting luck was the chief motivation for the paintings, it is difficult to explain why only a few show signs of having been speared. Perhaps the paintings were inspired by the need to increase the supply of animals. Cave art seems to have reached a peak toward the end of the Upper Paleolithic period, when the herds of game were decreasing.

The particular symbolic significance of the cave paintings in southwestern France is more explicitly revealed, perhaps, by the results of a study conducted by researchers Patricia Rice and Ann Paterson. The data they present suggest that the

animals portrayed in the cave paintings were mostly the ones that the painters preferred for meat and for materials such as hides. For example, wild cattle (bovines) and horses are portrayed more often than we would expect by chance, probably because they were larger and heavier (meatier) than other animals in the environment. In addition, the paintings mostly portray animals that the painters may have feared the most because of their size, speed, natural weapons such as tusks and horns, and the unpredictability of their behavior. That is, mammoths, bovines, and horses are portrayed more often than deer and reindeer. Thus, the paintings are consistent with the idea that the art is related to the importance of hunting in the economy of Upper Paleolithic people. Consistent with this idea, according to the investigators, is the fact that the art of the cultural period that followed the Upper Paleolithic also seems to reflect how people got their food. But in that period, when getting food no longer depended on hunting large game animals (because they were becoming extinct), the art ceased to focus on portrayals of animals.

Upper Paleolithic art was not confined to cave paintings. Many shafts of spears and similar objects were decorated with figures of animals. The anthropologist Alexander Marshack has an interesting interpretation of some of the engravings made during the Upper Paleolithic. He believes that as far back as 30.000 B.C., hunters may have used a system of notation, engraved on bone and stone, to mark phases of the Moon. If this is true, it would mean that Upper Paleolithic people were capable of complex thought and were consciously aware of

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their environment. In addition to other artworks, figurines representing the human female in exaggerated form have also been found at Upper Paleolithic sites. It has been suggested that these figurines were an ideal type or an expression of a desire for fertility.

Paragraph 1: The earliest discovered traces of art are beads and carvings, and then paintings, from sites dating back to the Upper Paleolithic period. We might expect that early artistic efforts would be crude, but the cave paintings of Spain and southern France show a marked degree of skill. So do the naturalistic paintings on slabs of stone excavated in southern Africa. Some of those slabs appear to have been painted as much as 28,000 years ago, which suggests that painting in Africa is as old as painting in Europe. But painting may be even older than that. The early Australians may have painted on the walls of rock shelters and cliff faces at least 30,000 years ago, and maybe as much as 60,000 years ago.

1. The word "marked" in the passage is closest in meaning to

   ○Considerable

   ○Surprising

   ○Limited

   ○Adequate

2. Paragraph 1 supports which of the following statements about painting in

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Europe?

○It is much older than painting in Australia.

○It is as much as 28,000 years old.

○It is not as old as painting in southern Africa.

○It is much more than 30,000 years old.

Paragraph 2：The researchers Peter Ucko and Andree Rosenfeld identified three principal locations of paintings in the caves of western Europe: (1) in obviously inhabited rock shelters and cave entrances; (2) in galleries immediately off the inhabited areas of caves; and (3) in the inner reaches of caves, whose difficulty of access has been interpreted by some as a sign that magical-religious activities were performed there.

3. The word "principal" in the passage is closest in meaning to

○Major

○Likely

○Well protected

○Distinct

4. According to paragraph 2, what makes some researchers think that certain cave paintings were connected with magical-religious activities?

○The paintings were located where many people could easily see them, allowing groups of people to participate in the magical-religious activities.

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○Upper Paleolithic people shared similar beliefs with contemporary peoples who use paintings of animals in their magical-religious rituals.

○Evidence of magical-religious activities has been found in galleries immediately off the inhabited areas of caves.

○The paintings were found in hard-to-reach places away from the inhabited parts of the cave.

Paragraph 3：The subjects of the paintings are mostly animals. The paintings rest on bare walls, with no backdrops or environmental trappings. Perhaps, like many contemporary peoples, Upper Paleolithic men and women believed that the drawing of a human image could cause death of injury, and if that were indeed their belief, it might explain why human figures are rarely depicted in cave art. Another explanation for the focus on animals might be that these people sought to improve their luck at hunting. This theory is suggested by evidence of chips in the painted figures, perhaps made by spears thrown at the drawings. But if improving their hunting luck was the chief motivation for the paintings, it is difficult to explain why only a few show signs of having been speared. Perhaps the paintings were inspired by the need to increase the supply of animals. Cave art seems to have reached a peak toward the end of the Upper Paleolithic period, when the herds of game were decreasing.

5． The word “trappings” in the passage is closest in meaning to

○Conditions

○Problems

○Influences

○Decorations

6. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○Upper Paleolithic people, like many contemporary peoples, believed that if they drew a human image in their cave art, it would cause death or injury.

○Many contemporary people believe that the drawing of a human image can cause death or injury, so they, like Upper Paleolithic people, rarely depicted human figures in their cave art.

○If Upper Paleolithic people, like many contemporary peoples, believed that the drawing of a human image could cause death or injury, this belief might explain why human figures are rarely depicted in cave art.

○Although many contemporary peoples believe that the drawing of a human image can cause death or injury, researchers cannot explain why Upper Paleolithic people rarely depicted human figures in their cave art.

7．According to paragraph 3, scholars explained chips in the painted figures of animals by proposing that

○Upper Paleolithic artists used marks to record the animals they had seen

○the paintings were inspired by the need to increase the supply of animals

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for hunting

○the artists had removed rough spots on the cave walls

○Upper Paleolithic people used the paintings to increase their luck at hunting

8. Why does the author mention that Upper Paleolithic cave art seemed to have "reached a peak toward the end of the Upper Paleolithic period, when the herds of game were decreasing"?

○To argue that Upper Paleolithic art creased to include animals when herds of game became scarce

○To provide support for the idea that the aim of the paintings was to increase the supply of animals for hunting

○To emphasize the continued improvement in the quality of cave art throughout the Upper Paleolithic period

○To show the direct connection between the decrease in herds of game and the end of the Upper Paleolithic period

Paragraph 4: The particular symbolic significance of the cave paintings in southwestern France is more explicitly revealed, perhaps, by the results of a study conducted by researchers Patricia Rice and Ann Paterson. The data they present suggest that the animals portrayed in the cave paintings were mostly the ones that the painters preferred for meat and for materials such as hides. For example, wild cattle (bovines) and horses are portrayed more often than we would expect by

chance, probably because they were larger and heavier (meatier) than other animals in the environment. In addition, the paintings mostly portray animals that the painters may have feared the most because of their size, speed, natural weapons such as tusks and horns, and the unpredictability of their behavior. That is, mammoths, bovines, and horses are portrayed more often than deer and reindeer. Thus, the paintings are consistent with the idea that the art is related to the importance of hunting in the economy of Upper Paleolithic people. Consistent with this idea, according to the investigators, is the fact that the art of the cultural period that followed the Upper Paleolithic also seems to reflect how people got their food. But in that period, when getting food no longer depended on hunting large game animals (because they were becoming extinct), the art ceased to focus on portrayals of animals.

9． According to paragraph 4, scholars believe that wild cattle, horses, and mammoths are the animals most frequently portrayed in cave paintings for all of the following reasons EXCEPT:

○These animals were difficult to hunt because their unpredictable behavior.

○People preferred these animals for their meat and for their skins.

○The painters admired the beauty of these large animals.

○People feared these animals because of their size and speed.

10． According to paragraph 4, which of the following may best represent the attitude of hunters toward deer and reindeer in the Upper Paleolithic period?

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○Hunters did not fear deer and reindeers as much as they did large game animals such as horses and mammoths.

○Hunters were not interested in hunting deer and reindeer because of their size and speed.

○Hunters preferred the meat and hides of deer and reindeer to those of other animals.

○Hunters avoided deer and reindeer because of their natural weapons, such as horns.

11． According to paragraph 4, what change is evident in the art of the period following the Upper Paleolithic?

○This new art starts to depict small animals rather than large ones.

○This new art ceases to reflect the ways in which people obtained their food.

○This new art no longer consists mostly of representations of animals.

○This new art begins to show the importance of hunting to the economy.

Paragraph 5：Upper Paleolithic art was not confined to cave paintings. Many shafts of spears and similar objects were decorated with figures of animals. The anthropologist Alexander Marshack has an interesting interpretation of some of the engravings made during the Upper Paleolithic. He believes that as far back as 30.000 B.C., hunters may have used a system of notation, engraved on bone and stone, to mark phases of the Moon. If this is true, it would mean that Upper

Paleolithic people were capable of complex thought and were consciously aware of their environment. In addition to other artworks, figurines representing the human female in exaggerated form have also been found at Upper Paleolithic sites. It has been suggested that these figurines were an ideal type or an expression of a desire for fertility.

12. According to paragraph 5, which of the following has been used as evidence to suggest that Upper Paleolithic people were capable of complex thought and conscious awareness of their environment?

○They engraved animal figures on the shafts of spears and other objects.

○They may have used engraved signs to record the phases of the Moon.

○Their figurines represented the human female in exaggerated form.

○They may have used figurines to portray an ideal type or to express a desire for fertility.

Paragraph 3：The subjects of the paintings are mostly animals. The paintings rest on bare walls, with no backdrops or environmental trappings. Perhaps, like many contemporary peoples, Upper Paleolithic men and women believed that the drawing of a human image could cause death of injury, and if that were indeed their belief, it might explain why human figures are rarely depicted in cave art. Another explanation for the focus on animals might be that these people sought to improve their luck at hunting. ■ This theory is suggested by evidence of chips in the painted figures, perhaps made by spears thrown at the drawings. ■ But if

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improving their hunting luck was the chief motivation for the paintings, it is difficult to explain why only a few show signs of having been speared. ■ Perhaps the paintings were inspired by the need to increase the supply of animals. Cave art seems to have reached a peak toward the end of the Upper Paleolithic period, when the herds of game were decreasing. ■

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

Therefore, if the paintings were connected with hunting, some other explanation is needed.

Where would the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that explain the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

Upper Paleolithic cave paintings in Western Europe are among humanity's earliest artistic efforts.

-
-
-

Answer choices

○Researchers have proposed several different explanations for the fact that animals were the most common subjects in the cave paintings.

○The art of the cultural period that followed the Upper Paleolithic ceased to portray large game animals and focused instead on the kinds of animals that people of that period preferred to hunt.

○Some researchers believe that the paintings found in France provide more explicit evidence of their symbolic significance than those found in Spain, southern Africa, and Australia.

○The cave paintings focus on portraying animals without also depicting the natural environments in which these animals are typically found.

○Some researchers have argued that the cave paintings mostly portrayed large animals that provided Upper Paleolithic people with meat and materials.

○Besides cave paintings, Upper Paleolithic people produced several other kinds of artwork, one of which has been thought to provide evidence of complex thought.

参考答案：

1. ○1

2. ○2

3. ○1

4. ○4

5. ○4

6. ○3

7. ○4

8.○2

9. ○3

10. ○1

11. ○3

12. ○2

13. ○3

14. ○1, 5, 6

参考译文

欧洲的岩洞艺术

迄今为止，发现的最早的并且有迹可寻的工艺品是珠链、雕刻还有是绘画，人类在旧石器时代晚期的遗址上发现了它们。虽然，我们可能会认为早期的艺术成就都是不成熟的，但西班牙与法国南部的岩洞画显示出了高超的技艺，在非洲南部发掘出的自然石板画也是如此。其中的一些石板画看上去像是在 28000 年前画出的，这表明非洲绘画与欧洲绘画一样时间久远，但可能更早些。至少 30000 年前，也可能追溯至 60000 年前，那会儿早期澳洲人就已经在岩石遮蔽的墙上和悬崖断面上作画了。

研究人员彼特·阿寇 和安德烈·罗森菲尔德指出西欧洞画的三个主要地点：（1）在明显有遮蔽可供人类居住的岩石和洞穴入口处，（2）在居住的洞穴一出门的走廊上，（3）在洞穴所能及的最深处，有人认为之所以在最深处作画是因为当时的人们曾在这里进行神秘的宗教活动。

这些绘画的主题大部分都是动物。这些画画在裸露的岩石上，没有任何背景和环境装饰。或许，同许多当代人一样，后石器时代的人们也相信画人物像会引起伤害或死亡。如果这确实是他们的信念，那就解释了为什么在洞穴绘画中很少描绘人物。对于画中以动物题材为主的另一个解释是，人们在探索如何提高打猎的命中率。墙上所画的动物身上有一些伤口，很可能是原始人向它们扔矛时留下的，这个证据也证实了以上判断。但如果提高打猎命中率真的是岩壁画的主要动机，那么就很难解释为什么只有少

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数画上有被矛戳过的痕迹。或许是出于增加猎物的需求而画的画。在后期旧石器时代猎群数量减少时，岩洞画艺术似乎达到了顶峰。

也许研究者帕特丽夏·赖斯和安·派特森所做研究的结果更清楚地揭示了法国东南部的岩洞画的特殊象征性意义。研究显示，绘画者喜欢食用的动物或喜欢用作兽皮的动物是岩洞画中经常被描绘的动物。比如，野牛（牛）和马的出现比我们预料的更为频繁，可能因为它们比其它动物更大更沉（肉更多）。另外，画作中主要描绘了绘画者害怕的动物，它们的体形、速度、与生俱来的武器如长牙和角，以及它们行为的不可预知性都令绘画者感到恐惧。于是，和鹿、驯鹿相比，猛犸、牛和马会更经常画在墙上。因此，在后旧石器时代人的经济中，岩洞艺术与打猎的重要性有关，这些画作也与这个观点相符合。看起来接下来的后旧石器时代文化期的艺术也反映了人们如何得到食物，根据调查者的研究，这一事实也与前文的想法一致。但在那个时期，当不再依附于猎取大型猎物获得食物时（因为它们开始变得稀少），岩洞艺术便不再以描绘动物为主了。

后期旧石器时代的艺术不仅仅局限于洞穴绘画。许多矛杆和与其类似的东西上都画了动物作为装饰。人类学家亚历山大·马斯哈克对后旧石器时代时期的一些雕刻品有一个有趣的解释。他认为在公元前 30000 年，猎人们可能使用了一种刻在骨头或石头上的标志法来标记不同的月相。如果此论述是真的，这就意味着后旧石器时代的人们已经有了复杂的思维并对他们的环境有了一个理性的认识。人们还在后期旧石器时代的遗址上发现了以夸张的形式描绘妇女的小雕塑。这也暗示了这些小雕塑是一种理想型，

或者说表达了当时的人类期望多生育的愿望。

Petroleum Resources

Petroleum, consisting of crude oil and natural gas, seems to originate from organic matter in marine sediment. Microscopic organisms settle to the seafloor and accumulate in marine mud. The organic matter may partially decompose, using up the dissolved oxygen in the sediment. As soon as the oxygen is gone, decay stops and the remaining organic matter is preserved.

Continued sedimentation—the process of deposits' settling on the sea bottom—buries the organic matter and subjects it to higher temperatures and pressures, which convert the organic matter to oil and gas. As muddy sediments are pressed together, the gas and small droplets of oil may be squeezed out of the mud and may move into sandy layers nearby. Over long periods of time (millions of years), accumulations of gas and oil can collect in the sandy layers. Both oil and gas are less dense than water, so they generally tend to rise upward through water-saturated rock and sediment.

Oil pools are valuable underground accumulations of oil, and oil fields are regions underlain by one or more oil pools. When an oil pool or field has been discovered, wells are drilled into the ground. Permanent towers, called derricks, used to be built to handle the long sections of drilling pipe. Now portable drilling machines are set up and are then dismantled and removed. When the well reaches a pool, oil usually rises up the well because of its density difference with water

beneath it or because of the pressure of expanding gas trapped above it. Although this rise of oil is almost always carefully controlled today, spouts of oil, or gushers, were common in the past. Gas pressure gradually dies out, and oil is pumped from the well. Water or steam may be pumped down adjacent wells to help push the oil out. At a refinery, the crude oil from underground is separated into natural gas, gasoline, kerosene, and various oils. Petrochemicals such as dyes, fertilizer, and plastic are also manufactured from the petroleum.

As oil becomes increasingly difficult to find, the search for it is extended into more-hostile environments. The development of the oil field on the North Slope of Alaska and the construction of the Alaska pipeline are examples of the great expense and difficulty involved in new oil discoveries. Offshore drilling platforms extend the search for oil to the ocean's continental shelves—those gently sloping submarine regions at the edges of the continents. More than one-quarter of the world's oil and almost one-fifth of the world's natural gas come from offshore, even though offshore drilling is six to seven times more expensive than drilling on land. A significant part of this oil and gas comes from under the North Sea between Great Britain and Norway.

Of course, there is far more oil underground than can be recovered. It may be in a pool too small or too far from a potential market to justify the expense of drilling. Some oil lies under regions where drilling is forbidden, such as national parks or other public lands. Even given the best extraction techniques, only about

30 to 40 percent of the oil in a given pool can be brought to the surface. The rest is far too difficult to extract and has to remain underground.

Moreover, getting petroleum out of the ground and from under the sea and to the consumer can create environmental problems anywhere along the line. Pipelines carrying oil can be broken by faults or landslides, causing serious oil spills. Spillage from huge oil-carrying cargo ships, called tankers, involved in collisions or accidental groundings (such as the one off Alaska in 1989) can create oil slicks at sea. Offshore platforms may also lose oil, creating oil slicks that drift ashore and foul the beaches, harming the environment. Sometimes, the ground at an oil field may subside as oil is removed. The Wilmington field near Long Beach, California, has subsided nine meters in 50 years; protective barriers have had to be built to prevent seawater from flooding the area. Finally, the refining and burning of petroleum and its products can cause air pollution. Advancing technology and strict laws, however, are helping control some of these adverse environmental effects.

Paragraph 1: Petroleum, consisting of crude oil and natural gas, seems to originate from organic matter in marine sediment. Microscopic organisms settle to the seafloor and accumulate in marine mud. The organic matter may partially decompose, using up the dissolved oxygen in the sediment. As soon as the oxygen is gone, decay stops and the remaining organic matter is preserved.

1. The word “accumulate” in the passage is closest in meaning to

○Grow up

○Build up

○Spread out

○Break apart

2. According to paragraph 1, which of the following is true about petroleum formation?

○Microscopic organisms that live in mud produce crude oil and natural gas.

○Large amounts of oxygen are needed for petroleum formation to begin.

○Petroleum is produced when organic material in sediments combines with decaying marine organisms.

○Petroleum formation appears to begin in marine sediments where organic matter is present.

Paragraph 1—2：Petroleum, consisting of crude oil and natural gas, seems to originate from organic matter in marine sediment. Microscopic organisms settle to the seafloor and accumulate in marine mud. The organic matter may partially decompose, using up the dissolved oxygen in the sediment. As soon as the oxygen is gone, decay stops and the remaining organic matter is preserved.

Continued sedimentation—the process of deposits' settling on the sea

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bottom—buries the organic matter and subjects it to higher temperatures and pressures, which convert the organic matter to oil and gas. As muddy sediments are pressed together, the gas and small droplets of oil may be squeezed out of the mud and may move into sandy layers nearby. Over long periods of time (millions of years), accumulations of gas and oil can collect in the sandy layers. Both oil and gas are less dense than water, so they generally tend to rise upward through water-saturated rock and sediment.

3． In paragraphs 1 and 2, the author's primary purpose is to

○Describe how petroleum is formed

○Explain why petroleum formation is a slow process

○Provide evidence that a marine environment is necessary for petroleum formation

○Show that oil commonly occurs in association with gas

4． Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○Higher temperatures and pressures promote sedimentation, which is responsible for petroleum formation.

○Deposits of sediments on top of organic matter increase the temperature of and pressure on the matter.

○Increase pressure and heat from the weight of the sediment turn the

organic remains into petroleum.

○The remains of microscopic organisms transform into petroleum once they are buried under mud.

Paragraph 3：Oil pools are valuable underground accumulations of oil, and oil fields are regions underlain by one or more oil pools. When an oil pool or field has been discovered, wells are drilled into the ground. Permanent towers, called derricks, used to be built to handle the long sections of drilling pipe. Now portable drilling machines are set up and are then dismantled and removed. When the well reaches a pool, oil usually rises up the well because of its density difference with water beneath it or because of the pressure of expanding gas trapped above it. Although this rise of oil is almost always carefully controlled today, spouts of oil, or gushers, were common in the past. Gas pressure gradually dies out, and oil is pumped from the well. Water or steam may be pumped down adjacent wells to help push the oil out. At a refinery, the crude oil from underground is separated into natural gas, gasoline, kerosene, and various oils. Petrochemicals such as dyes, fertilizer, and plastic are also manufactured from the petroleum.

5. The word “adjacent” in the passage is closest in meaning to

○Nearby

○Existing

○Special

○Deep

6. Which of the following can be inferred from paragraph 3 about gushers?

○They make bringing the oil to the surface easier.

○They signal the presence of huge oil reserves.

○They waste more oil than they collect.

○They are unlikely to occur nowadays.

Paragraph 4: As oil becomes increasingly difficult to find, the search for it is extended into more-hostile environments. The development of the oil field on the North Slope of Alaska and the construction of the Alaska pipeline are examples of the great expense and difficulty involved in new oil discoveries. Offshore drilling platforms extend the search for oil to the ocean's continental shelves—those gently sloping submarine regions at the edges of the continents. More than one-quarter of the world's oil and almost one-fifth of the world's natural gas come from offshore, even though offshore drilling is six to seven times more expensive than drilling on land. A significant part of this oil and gas comes from under the North Sea between Great Britain and Norway.

Paragraph 5: Of course, there is far more oil underground than can be recovered. It may be in a pool too small or too far from a potential market to justify the expense of drilling. Some oil lies under regions where drilling is forbidden, such as national parks or other public lands. Even given the best extraction techniques, only about 30 to 40 percent of the oil in a given pool can be brought to

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the surface. The rest is far too difficult to extract and has to remain underground.

7. Which of the following strategies for oil exploration is described in paragraph 4 and paragraph 5?

○Drilling under the ocean's surface

○Limiting drilling to accessible locations

○Using highly sophisticated drilling equipment

○Constructing technologically advanced drilling platforms

8. What does the development of the Alaskan oil field mentioned in paragraph 4 demonstrate?

○More oil is extracted from the sea than from land.

○Drilling for oil requires major financial investments.

○The global demand for oil has increased over the years.

○The North Slope of Alaska has substantial amounts of oil.

9. The word "sloping" in the passage is closest in meaning to

○Shifting

○Inclining

○Forming

○Rolling

Paragraph 5: Of course, there is far more oil underground than can be

recovered. It may be in a pool too small or too far from a potential market to justify the expense of drilling. Some oil lies under regions where drilling is forbidden, such as national parks or other public lands. Even given the best extraction techniques, only about 30 to 40 percent of the oil in a given pool can be brought to the surface. The rest is far too difficult to extract and has to remain underground.

10．According to paragraph 5, the decision to drill for oil depends on all of the following factors EXCEPT

○permission to access the area where oil has been found

○the availability of sufficient quantities of oil in a pool

○the location of the market in relation to the drilling site

○the political situation in the region where drilling would occur

Paragraph 6：Moreover, getting petroleum out of the ground and from under the sea and to the consumer can create environmental problems anywhere along the line. Pipelines carrying oil can be broken by faults or landslides, causing serious oil spills. Spillage from huge oil-carrying cargo ships, called tankers, involved in collisions or accidental groundings (such as the one off Alaska in 1989) can create oil slicks at sea. Offshore platforms may also lose oil, creating oil slicks that drift ashore and foul the beaches, harming the environment. Sometimes, the ground at an oil field may subside as oil is removed. The Wilmington field near Long Beach, California, has subsided nine meters in 50 years; protective barriers have had to be built to prevent seawater from flooding the area. Finally, the

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refining and burning of petroleum and its products can cause air pollution. Advancing technology and strict laws, however, are helping control some of these adverse environmental effects.

11. The word "foul" in the passage is closest in meaning to

○Reach

○Flood

○Pollute

○Alter

12. In paragraph 6, the author's primary purpose is to

○Provide examples of how oil exploration can endanger the environment

○Describe accidents that have occurred when oil activities were in progress

○Give an analysis of the effects of oil spills on the environment

○Explain how technology and legislation help reduce oil spills

Paragraph 2: Continued sedimentation—the process of deposits' settling on the sea bottom—buries the organic matter and subjects it to higher temperatures and pressures, which convert the organic matter to oil and gas. ■As muddy sediments are pressed together, the gas and small droplets of oil may be squeezed out of the mud and may move into sandy layers nearby. ■Over long periods of time (millions of years), accumulations of gas and oil can collect in the sandy layers. ■Both oil and gas are less dense than water, so they generally tend to rise

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upward through water-saturated rock and sediment. ■

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

Unless something acts to halt this migration, these natural resources will eventually reach the surface.

Where would the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

"Petroleum" is a broad term that includes both crude oil and natural gas.

●

●

●

Answer choices

○Petroleum formation is the result of biological as well as chemical activity.

○The difficulty of finding adequate sources of oil on land has resulted in a greater number of offshore drilling sites.

○Petroleum extraction can have a negative impact on the environment.

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○Petroleum tends to rise to the surface, since it is lower in density than water.

○Current methods of petroleum extraction enable oil producers to recover about half of the world's petroleum reserves.

○Accidents involving oil tankers occur when tankers run into shore reefs or collide with other vessels.

参考答案：

1. ○2

2. ○4

3. ○1

4. ○3

5. ○1

6. ○4

7. ○1

8. ○2

9. ○2

10. ○4

11. ○3

12. ○1

13. ○4

14. ○1, 2, 3

参考译文

石油资源

石油是由原油和天然气组成，都源自于海洋的有机沉淀。微小的有机物定居在海底并堆积在海泥里，有机物会局部分解，消耗沉淀里的溶解氧，当氧气消耗殆尽分解便停止，留下剩余的有机物。

持续的沉积——堆积物沉积到海底的过程将有机物埋在海底使之受到海底温度、高压的影响，最终转变成油和气体。当泥状沉积物被挤压在一起时，天然气和石油液滴会被挤出泥层，然后进入附近的沙层。经过很长的一个周期（数百万年），积聚的天然气和石油会在沙层中聚集。因为石油和天然气的密度都比水低，所以他们通常通过饱含水的岩层和沉积物往上升。

油床是宝贵的地下石油积聚处，而油田是被一个或多个油床覆盖区域。当人们发现油床或油田时，就会把井钻到地下。固定的塔称为井架，建造井架是为了控制长距离的钻杆。现代使用的便携式钻井机安装使用完成后，会被拆除和移走。因为石油的密度与在下层的水不同，或者因为石油上面的气体扩张形成的压力，当井探至油床时，石油通常会上升至井内。现在石油的上升已经可以很好的进行控制，但在过去，井喷或管涌经常发生。气体压力逐渐减小，然后油从井中被抽出。水或蒸汽会通过相邻的井被注入，以帮助推出石油。在炼油厂，地下的原油被分离成天然气、汽油、煤油和各种油类。石油还可用来生产石油化工产品，如染料、化肥、塑料

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制品等。

随着石油越来越难以找到，石油勘探已经开始到更恶劣的环境中进行。比如，在最新发现的油田案例中，阿拉斯加北部斜面油田就是一个管道建设尘本高、难度大的例子。海底钻探平台将寻找石油的区域延伸到了海洋大陆架上——陆地附近浅海下缓缓的斜坡。世界上四分之一以上的石油和近五分之一的天然气都来自近海，尽管近海钻井的成本比陆地钻井高 6 至 7 倍。世界上相当一部分的石油和天然气来自大不列颠和挪威之间的北海。

当然，地下还能发现更多的石油。油床可能太小或远离潜在的市场而不适宜开采。一些石油存在于禁止钻井的地区，如国家公园或其他公共土地。即使提供最好的采油技术，油池中也只有大约百分之三十到四十的石油可以挖掘至地面。其余的因为太难抽取而不得不留在地下。

此外，从地下和海底获得石油运送到消费者的途中的任何地方都会产生环境问题。如果石油运输管道因为故障或塌方损坏，将会造成了严重的石油泄漏。运载石油的油轮在发生碰撞或意外搁浅（如在 1989 年阿拉斯加发生的油轮搁浅）的情况下，石油泄露会使得海上产生浮油。海上钻井平台也可能会泄露石油，生成的浮油漂流到岸上造成海滩污染，损害环境。有时一个油田的石油被抽取后，地面会发生下沉。加州长滩附近的威尔明顿油田，已经在 50 年内下沉了 9 米；人们不得不建造保护围墙以防止海水流进这个地区。最后，石油炼制、燃烧以及其产品也会造成空气污染。

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不过不管怎样，先进的技术和严格的法律正在协助控制这些对环境的不利影响。

Meteorite Impact and Dinosaur Extinction

There is increasing evidence that the impacts of meteorites have had important effects on Earth, particularly in the field of biological evolution. Such impacts continue to pose a natural hazard to life on Earth. Twice in the twentieth century, large meteorite objects are known to have collided with Earth.

If an impact is large enough, it can disturb the environment of the entire Earth and cause an ecological catastrophe. The best-documented such impact took place 65 million years ago at the end of the Cretaceous period of geological history. This break in Earth's history is marked by a mass extinction, when as many as half the species on the planet became extinct. While there are a dozen or more mass extinctions in the geological record, the Cretaceous mass extinction has always intrigued paleontologists because it marks the end of the age of the dinosaurs. For tens of millions of years, those great creatures had flourished. Then, suddenly, they disappeared.

The body that impacted Earth at the end of the Cretaceous period was a meteorite with a mass of more than a trillion tons and a diameter of at least 10 kilometers. Scientists first identified this impact in 1980 from the worldwide layer of sediment deposited from the dust cloud that enveloped the planet after the impact. This sediment layer is enriched in the rare metal iridium and other elements that are relatively abundant in a meteorite but very rare in the crust of

Earth. Even diluted by the terrestrial material excavated from the crater, this component of meteorites is easily identified. By 1990 geologists had located the impact site itself in the Yucat region of Mexico. The crater, now deeply buried in sediment, was originally about 200 kilometers in diameter.

This impact released an enormous amount of energy, excavating a crater about twice as large as the lunar crater Tycho. The explosion lifted about 100 trillion tons of dust into the atmosphere, as can be determined by measuring the thickness of the sediment layer formed when this dust settled to the surface. Such a quantity of material would have blocked the sunlight completely from reaching the surface, plunging Earth into a period of cold and darkness that lasted at least several months. The explosion is also calculated to have produced vast quantities of nitric acid and melted rock that sprayed out over much of Earth, starting widespread fires that must have consumed most terrestrial forests and grassland. Presumably, those environmental disasters could have been responsible for the mass extinction, including the death of the dinosaurs.

Several other mass extinctions in the geological record have been tentatively identified with large impacts, but none is so dramatic as the Cretaceous event. But even without such specific documentation, it is clear that impacts of this size do occur and that their results can be catastrophic. What is a catastrophe for one group of living things, however, may create opportunities for another group. Following each mass extinction, there is a sudden evolutionary burst as new

species develop to fill the ecological niches opened by the event.

Impacts by meteorites represent one mechanism that could cause global catastrophes and seriously influence the evolution of life all over the planet. According to some estimates, the majority of all extinctions of species may be due to such impacts. Such a perspective fundamentally changes our view of biological evolution. The standard criterion for the survival of a species is its success in competing with other species and adapting to slowly changing environments. Yet an equally important criterion is the ability of a species to survive random global ecological catastrophes due to impacts.

Earth is a target in a cosmic shooting gallery, subject to random violent events that were unsuspected a few decades ago. In 1991 the United States Congress asked NASA to investigate the hazard posed today by large impacts on Earth. The group conducting the study concluded from a detailed analysis that impacts from meteorites can indeed be hazardous. Although there is always some risk that a large impact could occur, careful study shows that this risk is quite small.

Paragraph 1: There is increasing evidence that the impacts of meteorites have had important effects on Earth, particularly in the field of biological evolution. Such impacts continue to pose a natural hazard to life on Earth. Twice in the twentieth century, large meteorite objects are known to have collided with Earth.

1. The word pose in the passage is closest in the meaning to

○Claim

○Model

○Assume

○Present

Paragraph 2: If an impact is large enough, it can disturb the environment of the entire Earth and cause an ecological catastrophe. The best-documented such impact took place 65 million years ago at the end of the Cretaceous period of geological history. This break in Earth's history is marked by a mass extinction, when as many as half the species on the planet became extinct. While there are a dozen or more mass extinctions in the geological record, the Cretaceous mass extinction has always intrigued paleontologists because it marks the end of the age of the dinosaurs. For tens of millions of years, those great creatures had flourished. Then, suddenly, they disappeared.

2. In paragraph 2, why does the author include the information that dinosaurs had flourished for tens of millions of years and then suddenly disappeared?

○To support the claim that the mass extinction at the end of the Cretaceous is the best-documented of the dozen or so mass extinctions in the geological record

○To explain why as many as half of the species on Earth at the time are believed to have become extinct at the end of the Cretaceous

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○To explain why paleontologists have always been intrigued by the mass extinction at the end of the Cretaceous

○To provide evidence that an impact can be large enough to disturb the environment of the entire planet and cause an ecological disaster

Paragraph 3: The body that impacted Earth at the end of the Cretaceous period was a meteorite with a mass of more than a trillion tons and a diameter of at least 10 kilometers. Scientists first identified this impact in 1980 from the worldwide layer of sediment deposited from the dust cloud that enveloped the planet after the impact. This sediment layer is enriched in the rare metal iridium and other elements that are relatively abundant in a meteorite but very rare in the crust of Earth. Even diluted by the terrestrial material excavated from the crater, this component of meteorites is easily identified. By 1990 geologists had located the impact site itself in the Yucat region of Mexico. The crater, now deeply buried in sediment, was originally about 200 kilometers in diameter.

3. Which of the following can be inferred from paragraph 3 about the location of the meteorite impact in Mexico?

○The location of the impact site in Mexico was kept secret by geologists from 1980 to 1990.

○It was a well-known fact that the impact had occurred in the Yucat region.

○Geologists knew that there had been an impact before they knew where it

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had occurred.

○The Yucat region was chosen by geologists as the most probable impact site because of its climate.

4. According to paragraph 3, how did scientists determine that a large meteorite had impacted Earth?

○They discovered a large crater in the Yucat region of Mexico.

○They found a unique layer of sediment worldwide.

○They were alerted by archaeologists who had been excavating in the Yucat region.

○They located a meteorite with a mass of over a trillion tons.

Paragraph 4: This impact released an enormous amount of energy, excavating a crater about twice as large as the lunar crater Tycho. The explosion lifted about 100 trillion tons of dust into the atmosphere, as can be determined by measuring the thickness of the sediment layer formed when this dust settled to the surface. Such a quantity of material would have blocked the sunlight completely from reaching the surface, plunging Earth into a period of cold and darkness that lasted at least several months. The explosion is also calculated to have produced vast quantities of nitric acid and melted rock that sprayed out over much of Earth, starting widespread fires that must have consumed most terrestrial forests and grassland. Presumably, those environmental disasters could have been responsible for the mass extinction, including the death of the dinosaurs.

5. The word excavating in the passage is closest in the meaning to

○Digging out

○Extending

○Destroying

○Covering up

6. The word consumed in the passage is closest in the meaning to

○Changed

○Exposed

○Destroyed

○Covered

7. According to paragraph 4, all of the following statements are true of the impact at the end of the Cretaceous period EXCEPT:

○A large amount of dust blocked sunlight from Earth.

○Earth became cold and dark for several months.

○New elements were formed in Earth's crust.

○Large quantities of nitric acid were produced.

Paragraph 5: Several other mass extinctions in the geological record have been tentatively identified with large impacts, but none is so dramatic as the Cretaceous event. But even without such specific documentation, it is clear that

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impacts of this size do occur and that their results can be catastrophic. What is a catastrophe for one group of living things, however, may create opportunities for another group. Following each mass extinction, there is a sudden evolutionary burst as new species develop to fill the ecological niches opened by the event.

8. The phrase tentatively identified in the passage is closest in the meaning to

○Identified after careful study

○Identified without certainty

○Occasionally identified

○Easily identified

Paragraph 6: Impacts by meteorites represent one mechanism that could cause global catastrophes and seriously influence the evolution of life all over the planet. According to some estimates, the majority of all extinctions of species may be due to such impacts. Such a perspective fundamentally changes our view of biological evolution. The standard criterion for the survival of a species is its success in competing with other species and adapting to slowly changing environments. Yet an equally important criterion is the ability of a species to survive random global ecological catastrophes due to impacts.

9. The word perspective in the passage is closest in the meaning to

○Sense of values

○Point of view

○Calculation

○Complication

10. Paragraph 6 supports which of the following statements about the factors that are essential for the survival of a species?

○The most important factor for the survival of a species is its ability to compete and adapt to gradual changes in its environment.

○The ability of a species to compete and adapt to a gradually changing environment is not the only ability that is essential for survival.

○Since most extinctions of species are due to major meteorite impacts, the ability to survive such impacts is the most important factor for the survival of a species.

○The factors that are most important for the survival of a species vary significantly from one species to another.

Paragraph 7: Earth is a target in a cosmic shooting gallery, subject to random violent events that were unsuspected a few decades ago. In 1991 the United States Congress asked NASA to investigate the hazard posed today by large impacts on Earth. The group conducting the study concluded from a detailed analysis that impacts from meteorites can indeed be hazardous. Although there is always some risk that a large impact could occur, careful study shows that this risk is quite small.

11. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○Until recently, nobody realized that Earth is exposed to unpredictable violent impacts from space.

○In the last few decades, the risk of a random violent impact from space has increased.

○Since most violent events on Earth occur randomly, nobody can predict when or where they will happen.

○A few decades ago, Earth became the target of random violent events originating in outer space.

12. According to the passage, who conducted investigations about the current dangers posed by large meteorite impacts on Earth?

○Paleontologists

○Geologists

○The United States Congress

○NASA

Paragraph 6: Impacts by meteorites represent one mechanism that could cause global catastrophes and seriously influence the evolution of life all over the planet. ■According to some estimates, the majority of all extinctions of species may be due to such impacts. ■Such a perspective fundamentally changes our

view of biological evolution. ■The standard criterion for the survival of a species is its success in competing with other species and adapting to slowly changing environments. ■Yet an equally important criterion is the ability of a species to survive random global ecological catastrophes due to impacts.

13. Look at the four squares [■] that indicate where the following sentence can be added to the passage.

This is the criterion emphasized by Darwin's theory of evolution by natural selection.

Where would the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

Scientists have linked the mass extinction at the end of the Cretaceous with a meteorite impact on Earth.

-
-
-

Answer choices

○Scientists had believed for centuries that meteorite activity influenced evolution on Earth.

○An iridium-enriched sediment layer and a large impact crater in the Yucat provide evidence that a large meteorite struck Earth about 65 million years ago.

○The site of the large meteorite impact at the end of the Cretaceous period was identified in 1990.

○Large meteorite impacts, such as one at the end of the Cretaceous period, can seriously affect climate, ecological niches, plants, and animals.

○There have also been large meteorite impacts on the surface of the Moon, leaving craters like Tycho.

○Meteorite impacts can be advantageous for some species, which thrive, and disastrous for other species, which become extinct.

参考答案：

1. ○4

2. ○3

3. ○3

4. ○2

5. ○1

6. ○3

7. ○3.

8. ○2

9. ○2

10. ○2

11. ○1

12. ○4

13. ○3

14. ○2, 4, 6

参考译文

陨石撞击和恐龙的灭绝

越来越多的证据表明陨石撞击对地球造成的影响特别严重，尤其是生物进化领域。这种影响对地球上的生物来说，仍然是一种自然威胁。在二十世纪，被人们所知悉的就有两次大型陨石撞地球的事件发生。

当撞击力度特别大时，陨石和地球的相撞将扰乱整个地球的环境，并引发一场生态灾难。记载最完整的这种灾难曾发生在 6500 万年前，在地质历史阶段的白垩纪末期。地球历史上的那次重大灾难造成了大量生物死亡，当时多达一半的物种灭绝。根据地质史料记载，地球上有十几次甚至更多大型的物种灭绝，古生物学家一直对白垩纪大灭绝非常感兴趣，因为它标志着恐龙时代的结束。数千万年以来，那些庞大的生物繁盛活跃着；然后突然间，它们消失了。

白垩纪末期，撞击地球主体是一块巨大陨石，它的质量超过万亿吨，直径至少在 10 公里。1980 年科学家通过研究撞击后形成的、覆盖地球表面的尘雾沉积层，首次确认了这次撞击。该沉积层富含稀有金属铱和其他在陨石中含量较丰富但在地壳中却很稀有的元素。即便这些物质从陨石坑被挖掘出来后受到地球物质的稀释，其中的成分仍然很容易被鉴定出来。1990 年，地质学家已经将那次撞击的地点定位于墨西哥的尤卡地区。现在被深埋于沉积物中的陨石坑，最初的直径为 200 公里左右。

这次撞击释放出了巨大的能量，凿出了一个特别大的陨石坑，约为月球第谷山口面积的两倍大。那场爆炸将大量尘埃扬起至大气层中，尘埃降至地面后逐渐形成沉积岩，通过测量沉积岩的厚度，我们可以判断当时的大气中的尘埃约有 100 万亿吨。如此大量的物质存在于大气层中，将会完全阻隔阳光的照射，于是地球一瞬间进入了一个持续数月之久的寒冷黑暗时期。据估计，爆炸过程还产生了大量的硝酸和被溶解的岩浆并喷出地球外，造成了大面积火灾，大部分的森林和草原被燃尽。这些环境灾难很可能就是包括恐龙在内的大规模物种灭绝的原因。

根据地质学记载，一些其他大批生物的灭绝也被试验性地认为与类似的撞击有关，但都没有白垩纪的那次触目惊心。不过即便是没有具体史料依据，这种规模的撞击显然发生过，并且带来了灾难性的后果。然而对于一个生物种群而言算是大灾难，却有可能给另一个种群创造了机会。每一次大灭绝过后，都会有新的物种爆炸式地进化去填补由灭绝造成的物种空缺。

陨石撞击描绘了一个能够制造全球性的灾难的途径，这种灾难会对整个星球的生命体的进化带来重大影响。据估计，已经灭绝的所有物中，绝大部分都是由于这些撞击造成的。这种观点从根本上改变了我们对于生物进化的看法。一个物种生存的标准准则就是它成功地与其他物种对抗，并适应缓慢变化的环境。然而还有一个同等重要的准则就是，它们可以从随机的、由天体撞击造成的全球生态灾难中幸存。

几十年前，地球是宇宙射击场的一个靶子，容易受到未知的随机暴力事件的攻击。1991 年美国国会要求美国国家航空航天局调查大型撞击对地球造成的危害。指挥这项研究的团队通过详细的分析得出这样一个结论：陨石撞击确实是危险的。尽管大型撞击发生的风险依然存在，但是谨慎的研究这门也认为这种风险的出现几率非常小。

MINERALS AND PLANTS

Research has shown that certain minerals are required by plants for normal growth and development. The soil is the source of these minerals, which are absorbed by the plant with the water from the soil. Even nitrogen, which is a gas in its elemental state, in normally absorbed from the soil as nitrate ions. Some soils are notoriously deficient in micro nutrients and are therefore unable to support most plant life. So-called serpentine soils, for example, are deficient in calcium, and only plants able to tolerate low levels of this mineral can survive. In modern agriculture, mineral depletion of soils is a major concern, since harvesting crops interrupts the recycling of nutrients back to the soil.

Mineral deficiencies can often be detected by specific symptoms such as chlorosis (loss of chlorophyll resulting in yellow or white leaf issue), necrosis (isolated dead patches), anthocyanin formation (development of deep red pigmentation of leaves or stem), stunted growth, and development of woody tissue in an herbaceous plant. Soils are most commonly deficient in nitrogen and phosphorus. Nitrogen-deficient plants exhibit many of the symptoms just described. Leaves develop chlorosis; stems are short and slender, and anthocyanin discoloration occurs on stems, petioles, and lower leaf surfaces. Phosphorus-deficient plants are often stunted, with leaves turning a characteristic dark green, often with the accumulation of anthocyanin. Typically, older leaves are affected first as the phosphorus is mobilized to young growing tissue. Iron

deficiency is characterized by chlorosis between veins in young leaves.

Much of the research on nutrient deficiencies is based on growing plants hydroponically, that is, in soilless liquid nutrient solutions. This technique allows researchers to create solutions that selectively omit certain nutrients and then observe the resulting effects on the plants. Hydroponics has applications beyond basic research, since it facilitates the growing of greenhouse vegetables during winter. Acroponics, a technique in which plants are suspended and the roots misted with a nutrient solution, is another method for growing plants without soil.

While mineral deficiencies can limit the growth of plants, an overabundance of certain minerals can be toxic and can also limit growth. Saline soils, which have high concentrations of sodium chloride and other salts, limit plant growth, and research continues to focus on developing salt-tolerant varieties of agricultural crops. Research has focused on the toxic effects of heavy metals such as lead, cadmium, mercury, and aluminum; however, even copper and zinc, which are essential elements, can become toxic in high concentrations. Although most plants cannot survive in these soils, certain plants have the ability to tolerate high levels of these minerals.

Scientists have known for some time that certain plants, called hyper accumulators, can concentrate minerals at levels a hundredfold or greater than normal. A survey of known hyper accumulators identified that 75 percent of them

amassed nickel, cobalt, copper, zinc, manganese, lead, and cadmium are other minerals of choice. Hyper accumulators run the entire range of the plant world. They may be herbs, shrubs, or trees. Many members of the mustard family, spurge family, legume family, and grass family are top hyper accumulators. Many are found in tropical and subtropical areas of the world, where accumulation of high concentrations of metals may afford some protection against plant-eating insects and microbial pathogens.

Only recently have investigators considered using these plants to clean up soil and waste sites that have been contaminated by toxic levels of heavy metals – an environmentally friendly approach known as phytoremediation. This scenario begins with the planting of hyper accumulating species in the target area, such as an abandoned mine or an irrigation pond contaminated by runoff. Toxic minerals would first be absorbed by roots but later relocated to the stem and leaves. A harvest of the shoots would remove the toxic compounds off site to be burned or composted to recover the metal for industrial uses. After several years of cultivation and harvest, the site would be restored at a cost much lower than the price of excavation and reburial, the standard practice for remediation of contaminated soils. For examples, in field trials, the plant alpine pennycress removed zinc and cadmium from soils near a zinc smelter, and Indian mustard, native to Pakistan and India, has been effective in reducing levels of selenium salts by 50 percent in contaminated soils.

Paragraph1: Research has shown that certain minerals are required by plants for normal growth and development. The soil is the source of these minerals, which are absorbed by the plant with the water from the soil. Even nitrogen, which is a gas in its elemental state, in normally absorbed from the soil as nitrate ions. Some soils are notoriously deficient in micro nutrients and are therefore unable to support most plant life. So-called serpentine soils, for example, are deficient in calcium, and only plants able to tolerate low levels of this mineral can survive. In modern agriculture, mineral depletion of soils is a major concern, since harvesting crops interrupts the recycling of nutrients back to the soil.

1. According to Paragraph1, what is true of plants that can grow in serpentine soil?

- ○They absorb micronutrients unusually well.
- ○They require far less calcium than most plants do.
- ○They are able to absorb nitrogen in its elemental state.
- ○They are typically crops raised for food.

Paragraph2: Mineral deficiencies can often be detected by specific symptoms such as chlorosis (loss of chlorophyll resulting in yellow or white leaf issue), necrosis (isolated dead patches), anthocyanin formation (development of deep red pigmentation of leaves or stem), stunted growth, and development of woody tissue in an herbaceous plant. Soils are most commonly deficient in nitrogen and

phosphorus. Nitrogen-deficient plants exhibit many of the symptoms just described. Leaves develop chlorosis; stems are short and slender, and anthocyanin discoloration occurs on stems, petioles, and lower leaf surfaces. Phosphorus-deficient plants are often stunted, with leaves turning a characteristic dark green, often with the accumulation of anthocyanin. Typically, older leaves are affected first as the phosphorus is mobilized to young growing tissue. Iron deficiency is characterized by chlorosis between veins in young leaves.

2. The word exhibit in the passage is closest in meaning to

- ○fight off
- ○show
- ○cause
- ○spread

3. According to Paragraph2, which of the following symptoms occurs in phosphorus-deficient plants but not in plants deficient in nitrogen or iron?

- ○Chlorosis on leaves
- ○Change in leaf pigmentation to a dark shade of green
- ○Short, stunted appearance of stems
- ○Reddish pigmentation on the leaves or stem

4. According to Paragraph2, a symptom of iron deficiency is the presence in young leaves of

- Deep red discoloration between the veins.
- White or yellow tissue between the veins.
- Dead spots between the veins.
- Characteristic dark green veins.

Paragraph3: Much of the research on nutrient deficiencies is based on growing plants hydroponically, that is, in soilless liquid nutrient solutions. This technique allows researchers to create solutions that selectively omit certain nutrients and then observe the resulting effects on the plants. Hydroponics has applications beyond basic research, since it facilitates the growing of greenhouse vegetables during winter. Acroponics, a technique in which plants are suspended and the roots misted with a nutrient solution, is another method for growing plants without soil.

5. The word facilitates in the passage is closest in meaning to

- slows down
- affects
- makes easier
- focuses on

6. According to Paragraph3, what is the advantage of hydroponics for research on nutrient deficiencies in plants?

- It allows researchers to control what nutrients a plant receives.

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○It allows researchers to observe the growth of a large number of plants simultaneously.

○It is possible to directly observe the roots of plants.

○It is unnecessary to keep misting plants with nutrient solutions.

7. The word suspended in the passage is closest in meaning to

○grown

○protected

○spread out

○hung

Paragraph5: Scientists have known for some time that certain plants, called hyper accumulators, can concentrate minerals at levels a hundredfold or greater than normal. A survey of known hyper accumulators identified that 75 percent of them amassed nickel, cobalt, copper, zinc, manganese, lead, and cadmium are other minerals of choice. Hyper accumulators run the entire range of the plant world. They may be herbs, shrubs, or trees. Many members of the mustard family, spurge family, legume family, and grass family are top hyper accumulators. Many are found in tropical and subtropical areas of the world, where accumulation of high concentrations of metals may afford some protection against plant-eating insects and microbial pathogens.

8. Why does the author mention herbs, shrubs, and trees?

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○To provide examples of plant types that cannot tolerate high levels of harmful minerals.

○To show why so many plants are hyper accumulators.

○To help explain why hyper accumulators can be found in so many different places.

○To emphasize that hyper accumulators occur in a wide range of plant types.

9. The word afford in the passage is closest in meaning to

○offer

○prevent

○increase

○remove

Paragraph 6: Only recently have investigators considered using these plants to clean up soil and waste sites that have been contaminated by toxic levels of heavy metals – an environmentally friendly approach known as phytoremediation. This scenario begins with the planting of hyper accumulating species in the target area, such as an abandoned mine or an irrigation pond contaminated by runoff. Toxic minerals would first be absorbed by roots but later relocated to the stem and leaves. A harvest of the shoots would remove the toxic compounds off site to be burned or composted to recover the metal for industrial uses. After several years of cultivation and harvest, the site would be restored at a cost much lower than the price of excavation and reburial, the standard practice for remediation of

contaminated soils. For examples, in field trials, the plant alpine pennycress removed zinc and cadmium from soils near a zinc smelter, and Indian mustard, native to Pakistan and India, has been effective in reducing levels of selenium salts by 50 percent in contaminated soils.

10. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○Before considering phytoremediation, hyper accumulating species of plants local to the target area must be identified.

○The investigation begins with an evaluation of toxic sites in the target area to determine the extent of contamination.

○The first step in phytoremediation is the planting of hyper accumulating plants in the area to be cleaned up.

○Mines and irrigation ponds can be kept from becoming contaminated by planting hyper accumulating species in targeted areas.

11. It can be inferred from Paragraph6 that compared with standard practices for remediation of contaminated soils, phytoremediation

○does not allow for the use of the removed minerals for industrial purposes.

○can be faster to implement

○is equally friendly to the environment

○is less suitable for soils that need to be used within a short period of time.

12. Why does the author mention Indian mustard?

○To warn about possible risks involved in phytoremediation

○To help illustrate the potential of phytoremediation

○To show that hyper accumulating plants grow in many regions of the world

○To explain how zinc contamination can be reduced.

Paragraph5: Scientists have known for some time that certain plants, called hyper accumulators, can concentrate minerals at levels a hundredfold or greater than normal. ■ A survey of known hyper accumulators identified that 75 percent of them amassed nickel, cobalt, copper, zinc, manganese, lead, and cadmium are other minerals of choice. ■Hyper accumulators run the entire range of the plant world. ■ They may be herbs, shrubs, or trees. ■ Many members of the mustard family, spurge family, legume family, and grass family are top hyper accumulators. Many are found in tropical and subtropical areas of the world, where accumulation of high concentrations of metals may afford some protection against plant-eating insects and microbial pathogens.

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

Certain minerals are more likely to be accumulated in large quantities than others.

Where could the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some answer choices do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

Plants need to absorb certain minerals from the soil in adequate quantities for normal growth and development.

●

●

●

Answer Choices

○Some plants are able to accumulate extremely high levels of certain minerals and thus can be used to clean up soils contaminated with toxic levels of these minerals.

○Though beneficial in lower levels, high levels of salts, other minerals, and heavy metals can be harmful to plants.

○When plants do not absorb sufficient amounts of essential minerals, characteristic abnormalities result.

○Because high concentrations of sodium chloride and other salts limit growth in most plants, much research has been done in an effort to develop salt-tolerant agricultural crops.

○Some plants can tolerate comparatively low levels of certain minerals, but such plants are of little use for recycling nutrients back into depleted soils.

○Mineral deficiencies in many plants can be cured by misting their roots with a nutrient solution or by transferring the plants to a soilless nutrient solution.

参考答案：

1.○2

2.○2

3.○2

4.○2

5.○3

6.○1

7.○4

8.○4

9.○1

10.○3

11.○4

12.○2

13.○1

14.○1, 2, 3

参考译文

矿物质和植物

研究表明，某些矿物质是植物正常生长发育所必需的。土壤是这些矿物质的来源，它们通过水分被植物从土壤中吸收。即使是元素状态为气体的氮，也通常作为硝酸根离子从土壤中被吸收。众所周知，一些土壤缺乏微量营养素，因此大多数植物不能生长。例如所谓的蛇纹岩土壤，由于缺乏钙，只有那些能忍受如此低水平的钙的植物才能够存活。在现代农业，土壤矿物质枯竭是一个大问题,因为收割庄稼切断了养分返回土壤的循环。

矿物质缺乏通常可由特定的症状检测出来，如褪绿（叶绿素损失导致黄叶或白叶的现象）、坏疽（孤立的坏死斑）、花青素的形成（形成深红色叶片和茎色素沉积）、发育不良，以及草本植物长木质组织。土壤最常缺乏的是氮和磷。氮缺乏植物表现出了刚才描述的许多症状：叶片黄化、茎短而细以及发生在茎、叶柄以及叶子下角质层的花青素变色。磷缺乏的植物往往发育不良，叶片变成特殊的深绿色，经常伴随着花青素的积累。由于磷流向新生的组织，通常较老的叶片首先受到影响。铁缺乏症的特点是嫩叶的叶脉之间萎黄。

大多数关于营养素缺乏症的研究都基于水培法，即在无土营养液中培养。这项技术允许研究人员创造缺乏某种营养素的溶液，然后观察对植物生长造成的影响。水培法的应用已经超越了基础研究，因为它促进了温室蔬菜在冬季的生长。气培法，一种把植物悬挂起来，将其根部喷上营养液，

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是另外一种无土栽培的方法。

虽然缺乏矿物质会抑制植物生长，但某些矿物质过量可能会有毒，同样也会抑制植物生长。含有高浓度的氯化钠和其他盐类的盐碱土壤抑制植物生长，于是研究继续集中开发耐盐农作物品种。着重研究重金属的毒性作用，如铅、镉、汞、铝；然而即使是铜和锌这样的必需元素，如果浓度过高也会产生毒性。虽然大多数植物无法在这种土壤生存，某些植物却能够忍耐如此高含量的矿物质。

科学家早前就了解到，某些所谓的富集植物能够比普通植物多集中一百倍甚至更多的矿物质。一项对已知富集植物的调查表明，它们中 75%积聚了镍，而钴、铜、锌、锰、铅和镉则是其他选择性聚集的矿物质。富集植物广泛分布于整个植物界，它们可能是草本植物、灌木或树。芥属、大戟属、豆科和禾本科植物中的许多成员都是靠前的富集植物。许多富集植物被发现于热带和亚热带，金属可以为植物提供保护，对抗食草类昆虫和细菌病原体。

直到最近研究者才考虑用这些植物来清理已经被有毒重金属污染的土壤和废弃物物处理点——一种被称为植物修复的环境友好方法。这套方案首先从在目标区域种植超积累物种开始，如在废弃矿井和被径流污染的灌溉池塘。有毒矿物质首先被根吸收，随后被运送至茎和叶。收割下来的枝叶将被焚烧以移除有毒化合物或被制成混合肥料回收金属用于工业。经过几年的种植和收割，该污染点将被修复，而其造价远比修复污染土壤的标

准做法——挖掘和填埋来得低。举例来说，在实地试验中，高山蕨菜从靠近一个锌冶炼厂的土壤中去除了锌和镉，原产自巴基斯坦和印度的印度芥菜可以将染土壤中硒的水平有效地降低 50%。

THE ORIGIN OF THE PACIFIC ISLAND PEOPLE

The greater Pacific region, traditionally called Oceania, consists of three cultural areas: Melanesia, Micronesia, and Polynesia. Melanesia, in the southwest Pacific, contains the large islands of New Guinea, the Solomons, Vanuatu, and New Caledonia. Micronesia, the area north of Melanesia, consists primarily of small scattered islands. Polynesia is the central Pacific area in the great triangle defined by Hawaii, Easter Island, and New Zealand. Before the arrival of Europeans, the islands in the two largest cultural areas, Polynesia and Micronesia, together contained a population estimated at 700,000.

Speculation on the origin of these Pacific islanders began as soon as outsiders encountered them, in the absence of solid linguistic, archaeological, and biological data, many fanciful and mutually exclusive theories were devised. Pacific islanders are variously thought to have come from North America, South America, Egypt, Israel, and India, as well as Southeast Asia. Many older theories implicitly deprecated the navigational abilities and overall cultural creativity of the Pacific islanders. For example, British anthropologists G. Elliot Smith and W. J. Perry assumed that only Egyptians would have been skilled enough to navigate and colonize the Pacific. They inferred that the Egyptians even crossed the Pacific to found the great civilizations of the New World (North and South America). In 1947 Norwegian adventurer Thor Heyerdahl drifted on a balsa-log raft westward with

the winds and currents across the Pacific from South America to prove his theory that Pacific islanders were Native Americans (also called American Indians). Later Heyerdahl suggested that the Pacific was peopled by three migrations: by Native Americans from the Pacific Northwest of North America drifting to Hawaii, by Peruvians drifting to Easter Island, and by Melanesians. In 1969 he crossed the Atlantic in an Egyptian style reed boat to prove Egyptian influences in the Americas. Contrary to these theorists, the overwhelming evidence of physical anthropology, linguistics, and archaeology shows that the Pacific islanders came from Southeast Asia and were skilled enough as navigators to sail against the prevailing winds and currents.

The basic cultural requirements for the successful colonization of the Pacific islands include the appropriate boat-building, sailing, and navigation skills to get to the islands in the first place, domesticated plants and gardening skills suited to often marginal conditions, and a varied inventory of fishing implements and techniques. It is now generally believed that these prerequisites originated with peoples speaking Austronesian languages (a group of several hundred related languages) and began to emerge in Southeast Asia by about 5000 B. C.E. The culture of that time, based on archaeology and linguistic reconstruction, is assumed to have had a broad inventory of cultivated plants including taro, yarns, banana, sugarcane, breadfruit, coconut, sago, and rice. Just as important, the culture also possessed the basic foundation for an effective maritime adaptation, including outrigger canoes and a variety of fishing techniques that could be

effective for overseas voyaging.

Contrary to the arguments of some that much of the pacific was settled by Polynesians accidentally marooned after being lost and adrift, it seems reasonable that this feat was accomplished by deliberate colonization expeditions that set out fully stocked with food and domesticated plants and animals. Detailed studies of the winds and currents using computer simulations suggest that drifting canoes would have been a most unlikely means of colonizing the Pacific. These expeditions were likely driven by population growth and political dynamics on the home islands, as well as the challenge and excitement of exploring unknown waters. Because all Polynesians, Micronesians, and many Melanesians speak Austronesian languages and grow crops derived from Southeast Asia, all these peoples most certainly derived from that region and not the New World or elsewhere. The undisputed pre-Columbian presence in Oceania of the sweet potato, which is a New World domesticate, has sometimes been used to support Heyerdahl's "American Indians in the Pacific" theories. However, this is one plant out of a long list of Southeast Asian domesticates. As Patrick Kirch, an American anthropologist, points out, rather than being brought by rafting South Americans, sweet potatoes might just have easily been brought back by returning Polynesian navigators who could have reached the west coast of South America.

Paragraph1: The greater Pacific region, traditionally called Oceania, consists

of three cultural areas: Melanesia, Micronesia, and Polynesia. Melanesia, in the southwest Pacific, contains the large islands of New Guinea, the Solomons, Vanuatu, and New Caledonia. Micronesia, the area north of Melanesia, consists primarily of small scattered islands. Polynesia is the central Pacific area in the great triangle defined by Hawaii, Easter Island, and New Zealand. Before the arrival of Europeans, the islands in the two largest cultural areas, Polynesia and Micronesia, together contained a population estimated at 700,000.

1. According to Paragraph1, all of the following are true statements about Melanesia, Micronesia, and Polynesia EXCEPT

- Collectively, these regions are traditionally known as Oceania.
- These islands of Micronesia are small and spread out
- Hawaii, Easter Island, and New Zealand mark the boundaries of Polynesia.
- Melanesia is situated to the north of Micronesia.

Paragraph2: Speculation on the origin of these Pacific islanders began as soon as outsiders encountered them, in the absence of solid linguistic, archaeological, and biological data, many fanciful and mutually exclusive theories were devised. Pacific islanders ere variously thought to have come from North America, South America, Egypt, Israel, and India, as well as Southeast Asia. Many older theories implicitly deprecated the navigational abilities and overall cultural creativity of the Pacific islanders. For example, British anthropologists G. Elliot Smith and W. J. Perry assumed that only Egyptians would have been skilled enough to navigate

and colonize the Pacific. They inferred that the Egyptians even crossed the Pacific to found the great civilizations of the New World (North and South America). In1947 Norwegian adventurer Thor Heyerdahl drifted on a balsa-log raft westward with the winds and currents across the Pacific from South America to prove his theory that Pacific islanders were Native Americans (also called American Indians). Later Heyerdahl suggested that the Pacific was peopled by three migrations: by Native Americans from the Pacific Northwest of North America drifting to Hawaii, by Peruvians drifting to Easter Island, and by Melanesians. In 1969 he crossed the Atlantic in an Egyptian style reed boat to prove Egyptian influences in the Americas. Contrary to these theorists, the overwhelming evidence of physical anthropology, linguistics, and archaeology shows that the Pacific islanders came from Southeast Asia and were skilled enough as navigators to sail against the prevailing winds and currents.

2. By stating that the theories are mutually exclusive the author means that

- ○if one of the theories is true, then all the others must be false
- ○the differences between the theories are unimportant
- ○taken together, the theories cover all possibilities
- ○the theories support each other

3. The word overwhelming in the passage is closest in meaning to

- ○powerful
- ○favorable

○current

○reasonable

4. According to Paragraph2, which of the following led some early researchers to believe that the Pacific islanders originally came from Egypt?

○Egyptians were known to have founded other great civilizations.

○Sailors from other parts of the world were believed to lack the skills needed to travel across the ocean.

○Linguistic, archaeological, and biological data connected the islands to Egypt.

○Egyptian accounts claimed responsibility for colonizing the Pacific as well as the Americas.

5. Which of the following can be inferred from Paragraph2 about early theories of where the first inhabitants of the Pacific islands came from?

○They were generally based on solid evidence.

○They tried to account for the origin of the characteristic features of the languages spoken by Pacific islanders.

○They assumed that the peoples living in Southeast Asia did not have the skills needed to sail to the Pacific islands.

○They questioned the ideas of G. Elliot Smith and W. J. Perry.

Paragraph3: The basic cultural requirements for the successful colonization of the Pacific islands include the appropriate boat-building, sailing, and navigation

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skills to get to the islands in the first place, domesticated plants and gardening skills suited to often marginal conditions, and a varied inventory of fishing implements and techniques. It is now generally believed that these prerequisites originated with peoples speaking Austronesian languages (a group of several hundred related languages) and began to emerge in Southeast Asia by about 5000 B. C.E. The culture of that time, based on archaeology and linguistic reconstruction, is assumed to have had a broad inventory of cultivated plants including taro, yarns, banana, sugarcane, breadfruit, coconut, sago, and rice, Just as important, the culture also possessed the basic foundation for an effective maritime adaptation, including outrigger canoes and a variety of fishing techniques that could be effective for overseas voyaging.

6. The word implements in the passage is closest in meaning to

○skills

○tools

○opportunities

○practices

7. All of the following are mentioned in Paragraph3 as required for successful colonization of the Pacific islands EXCEPT

○knowledge of various Austronesian languages

○a variety of fishing techniques

○navigational skills

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○knowledge of plant cultivation

8. In Paragraph3, why does the author provide information about the types of crops grown and boats used in Southeast Asia during the period around 5000 B. C. E.?

○To evaluate the relative importance of agriculture and fishing to early Austronesian peoples.

○To illustrate the effectiveness of archaeological and linguistic methods in discovering details about life in ancient times.

○To contrast living conditions on the continent of Asia with living conditions on the Pacific islands.

○To demonstrate that people from this region had the skills and resources necessary to travel to and survive on the Pacific islands.

Paragraph4: Contrary to the arguments of some that much of the pacific was settled by Polynesians accidentally marooned after being lost and adrift, it seems reasonable that this feat was accomplished by deliberate colonization expeditions that set out fully stocked with food and domesticated plants and animals. Detailed studies of the winds and currents using computer simulations suggest that drifting canoes would have been a most unlikely means of colonizing the Pacific. These expeditions were likely driven by population growth and political dynamics on the home islands, as well as the challenge and excitement of exploring unknown waters. Because all Polynesians, Micronesians, and many Melanesians speak

Austronesian languages and grow crops derived from Southeast Asia, all these peoples most certainly derived from that region and not the New World or elsewhere. The undisputed pre-Columbian presence in Oceania of the sweet potato, which is a New World domesticate, has sometimes been used to support Heyerdahl's "American Indians in the Pacific" theories. However, this is one plant out of a long list of Southeast Asian domesticates. As Patrick Kirch, an American anthropologist, points out, rather than being brought by rafting South Americans, sweet potatoes might just have easily been brought back by returning Polynesian navigators who could have reached the west coast of South America.

9. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage?

Incorrect choices change the meaning in important ways or leave out essential information.

○Some people have argued that the Pacific was settled by traders who became lost while transporting domesticated plants and animals.

○The original Polynesian settlers were probably marooned on the islands, but they may have been joined later by carefully prepared colonization expeditions.

○Although it seems reasonable to believe that colonization expeditions would set out fully stocked, this is contradicted by much of the evidence.

○The settlement of the Pacific islands was probably intentional and well planned rather than accidental as some people have proposed.

10. The word undisputed in the passage is closest in meaning to

○mysterious

○unexpected

○acknowledged

○significant

11. According to Paragraph4, which of the following is NOT an explanation for why a group of people might have wanted to colonize the Pacific islands?

○As their numbers increased, they needed additional territory.

○The winds and currents made the islands easy to reach.

○The political situation at home made emigration desirable,

○They found exploration challenging and exciting.

12. Why does the author mention the views of “Patrick Kirch”?

○To present evidence in favor of Heyerdahl’s idea about American Indians reaching Oceania

○To emphasize the familiarity of Pacific islanders with crops from many different regions of the world

○To indicate that supposed proof for Heyerdahl’s theory has an alternative explanation.

○To demonstrate that some of the same crops were cultivated in both South America and Oceania.

Paragraph2: Speculation on the origin of these Pacific islanders began as soon as outsiders encountered them, in the absence of solid linguistic, archaeological, and biological data, many fanciful and mutually exclusive theories were devised. Pacific islanders ere variously thought to have come from North America, South America, Egypt, Israel, and India, as well as Southeast Asia. ■ Many older theories implicitly deprecated the navigational abilities and overall cultural creativity of the Pacific islanders. ■ For example, British anthropologists G. Elliot Smith and W. J. Perry assumed that only Egyptians would have been skilled enough to navigate and colonize the Pacific. ■ They inferred that the Egyptians even crossed the Pacific to found the great civilizations of the New World (North and South America). ■ In 1947 Norwegian adventurer Thor Heyerdahl drifted on a balsa-log raft westward with the winds and currents across the Pacific from South America to prove his theory that Pacific islanders were Native Americans (also called American Indians). Later Heyerdahl suggested that the Pacific was peopled by three migrations: by Native Americans from the Pacific Northwest of North America drifting to Hawaii, by Peruvians drifting to Easter Island, and by Melanesians. In 1969 he crossed the Atlantic in an Egyptian style reed boat to prove Egyptian influences in the Americas. Contrary to these theorists, the overwhelming evidence of physical anthropology, linguistics, and archaeology shows that the Pacific islanders came from Southeast Asia and were skilled enough as navigators to sail against the prevailing winds and currents.

13. Look at the four squares [■] that indicate where the following sentence

could be added to the passage.

Later theories concentrate on journeys in the other direction.

Where could the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some answer choices do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

Together, Melanesia, Micronesia, and Polynesia make up the region described as the Pacific islands, or Oceania.

-
-
-

Answer Choices

○The first Europeans to reach the area assumed that the islands' original inhabitants must have drifted to Oceania, perhaps from Egypt or the Americas.

○It is now believed that the process of colonization required a great deal of skill, determination, and planning and could not have happened by chance.

○Using linguistic and archaeological evidence, anthropologists have determined that the first Pacific islanders were Austronesian people from Southeast Asia.

○New evidence suggests that, rather than being isolated, Pacific islanders engaged in trade and social interaction with peoples living in Southeast Asia.

○Although early colonizers of the islands probably came from agriculture-based societies, they were obliged to adopt an economy based on fishing

○Computer simulations of the winds and currents in the Pacific have shown that reaching the Pacific islands was probably much easier than previously thought.

参考答案

1.○4

2.○1

3.○1

4.○2

5.○3

6.○2

7.○1

8.○4

9.○4

10.○3

11.○2

12.○3

13.○4

14.○1，2，3

参考译文

太平洋群岛居民的起源

广义的太平洋地区，传统上被称作大洋洲，由三块文化区域组成：美拉尼西亚，密克罗尼西亚和玻利尼西亚。美拉尼西亚，在西南太平洋，包含了新几内亚岛、所罗门、瓦努阿图和新喀里多尼亚的广大岛屿。密克罗尼西亚在美拉尼西亚的北边，主要由一些分散的岛屿组成。玻利尼西亚是太平洋中心地区，位于由夏威夷、东部群岛和新西兰的三大岛屿组成的三角区域中。在欧洲人到来之前，最大的玻利尼西亚和密克罗尼西亚岛屿群一共有差不多 70 万人口。

对于太平洋群岛居民起源的思索开始于外来者和岛民们的接触，由于缺乏可靠的语言，考古学和生物学资料，出现了很多奇异并且互斥的理论。之前太平洋居民曾被认为来自北美洲、南美洲、埃及、以色列和印度，以及东南亚。许多古老的理论含蓄地贬低了太平洋群岛居民的航海能力和综合文化创造力。比如说，英国人类学家 G. Elliot Smith 和 W. J. Perry 认为只有埃及人才能熟练地进行航海和统治太平洋。他们推断埃及人甚至曾经穿越过太平洋去寻找新世界的文明（北美和南美）。1947 年挪威探险家 Thor Heyerdahl 为了证明他太平洋居民是美洲本土居民（也被称作美洲印第安人）的理论，用一只带有标志的轻质木筏，借助风力和水流从南美洲漂流过了太平洋。后来 Heyerdahl 表明太平洋人来自三个移民群体：从北美洲西北漂流到夏威夷的美国本土居民，从秘鲁往东部群岛的漂流者，还有美拉尼西亚人。1969 年，他驾驶一条埃及样式的芦苇船穿过大西洋，

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证明埃及人在美洲的影响。与这些理论相矛盾的是，有关物理人类学、语言学和考古学的权威证据表明太平洋居民来自东南亚并且他们有足够的能力来逆着风向和洋流航行。

太平洋群岛成功的殖民地化需要的基础文化条件包括：适当的造船、航行和航海技术以首先到达岛屿；适应贫瘠条件的驯化植物和园艺技术；各种各样的捕鱼器具和技术。现在普遍认为这些先决条件是那些说南岛语（一个有几百种亲属语种的语系）的人所带来的，他们公元前 5000 年前就出现在东南亚。通过考古学和语言学的重建发现，那个时候的文明拥有广泛的植物储存，包括芋头、纱、香蕉、甘蔗、面包果树、椰子、西米和稻米。同样重要地，当时的社会也具备适应海洋的基础，包括桅杆船和各种各样有利于越洋航行的捕鱼技术。

与那个太平洋人很多都是玻利尼西亚人偶然迷失和漂流而定居下来的说法相反的是，这些功绩是通过有意的殖民远征来实现的，他们那些准备周详的，出发时满载食物、已驯化的植物和动物。通过电脑模拟对风向和洋流进行的详细研究表明船只漂流是最不可能的殖民太平洋的途径。这些远征可能是由本土的人口增长和政治动荡以及探索未知水域的挑战和兴奋所驱动的。因为所有的玻利尼西亚人、密克罗尼西亚人和很多美拉尼西亚人说南岛语，种植的庄稼起源于东南亚，所以全部的这些人最有可能来自那个地方，而不是新世界或者其他地方。甘薯，一种新世界的品种，哥伦比亚发现美洲大陆前它就在大洋洲的出现是无可置疑的，这有时候被用来证明 Heyerdahl 的美国印第安人在太平洋的理论。然而，这是一种在东南

亚驯化植物的长名单之外的植物。正如美国人类学家 Patrick Kirch 所指出的，比起从南美漂流过来，土豆更容易被那些到过南美的玻利尼西亚返航者携带来。

THE CAMBRIAN EXPLOSION

The geologic timescale is marked by significant geologic and biological events, including the origin of Earth about 4.6 billion years ago, the origin of life about 3.5 billion years ago, the origin of eukaryotic life-forms (living things that have cells with true nuclei) about 1.5 billion years ago, and the origin of animals about 0.6 billion years ago. The last event marks the beginning of the Cambrian period. Animals originated relatively late in the history of Earth – in only the last 10 percent of Earth's history. During a geologically brief 100-million-year period, all modern animal groups (along with other animals that are now extinct) evolved. This rapid origin and diversification of animals is often referred to as "the Cambrian explosion."

Scientists have asked important questions about this explosion for more than a century. Why did it occur so late in the history of Earth? The origin of multicellular forms of life seems a relatively simple step compared to the origin of life itself. Why does the fossil record not document the series of evolutionary changes during the evolution of animals? Why did animal life evolve so quickly? Paleontologists continue to search the fossil record for answers to these questions.

One interpretation regarding the absence of fossils during this important 100-million-year period is that early animals were soft bodied and simply did not fossilize. Fossilization of soft-bodied animals is less likely than fossilization of

hard-bodied animals, but it does occur. Conditions that promote fossilization of soft-bodied animals include very rapid covering by sediments that create an environment that discourages decomposition. In fact, fossil beds containing soft-bodied animals have been known for many years.

The Ediacara fossil formation, which contains the oldest known animal fossils, consists exclusively of soft-bodied forms. Although named after a site in Australia, the Ediacara formation is worldwide in distribution and dates to Precambrian times. This 700-million-year-old formation gives few clues to the origins of modern animals, however, because paleontologists believe it represents an evolutionary experiment that failed. It contains no ancestors of modern animal groups.

A slightly younger fossil formation containing animal remains is the Tommotian formation, named after a locale in Russia. It dates to the very early Cambrian period, and it also contains only soft-bodied forms. At one time, the animals present in these fossil beds were assigned to various modern animal groups, but most paleontologists now agree that all Tommotian fossils represent unique body forms that arose in the early Cambrian period and disappeared before the end of the period, leaving no descendants in modern animal groups.

A third fossil formation containing both soft-bodied and hard-bodied animals provides evidence of the result of the Cambrian explosion. This fossil formation,

called the Burgess Shale, is in Yoho National Park in the Canadian Rocky Mountains of British Columbia. Shortly after the Cambrian explosion, mud slides rapidly buried thousands of marine animals under conditions that favored fossilization. These fossil beds provide evidence of about 32 modern animal groups, plus about 20 other animal body forms that are so different from any modern animals that they cannot be assigned to any one of the modern groups. These unassignable animals include a large swimming predator called *Anomalocaris* and a soft-bodied animal called *Wiwaxia*, which ate detritus or algae. The Burgess Shale formation also has fossils of many extinct representatives of modern animal groups. For example, a well-known Burgess Shale animal called *Sidneyia* is a representative of a previously unknown group of arthropods (a category of animals that includes insects, spiders, mites, and crabs).

Fossil formations like the Burgess Shale show that evolution cannot always be thought of as a slow progression. The Cambrian explosion involved rapid evolutionary diversification, followed by the extinction of many unique animals. Why was this evolution so rapid? No one really knows. Many zoologists believe that it was because so many ecological niches were available with virtually no competition from existing species. Will zoologists ever know the evolutionary sequences in the Cambrian explosion? Perhaps another ancient fossil bed of soft-bodied animals from 600-million-year-old seas is awaiting discovery.

Paragraph1: The geologic timescale is marked by significant geologic and biological events, including the origin of Earth about 4.6 billion years ago, the origin of life about 3.5 billion years ago, the origin of eukaryotic life-forms (living things that have cells with true nuclei) about 1.5 billion years ago, and the origin of animals about 0.6 billion years ago. The last event marks the beginning of the Cambrian period. Animals originated relatively late in the history of Earth – in only the last 10 percent of Earth's history. During a geologically brief 100-million-year period, all modern animal groups (along with other animals that are now extinct) evolved. This rapid origin and diversification of animals is often referred to as "the Cambrian explosion."

1. The word significant in the passage is closest in meaning to

○numerous

○important

○unexplained

○sudden

2. The word relatively in the passage is closest in meaning to

○surprisingly

○collectively

○comparatively

○characteristically

3. The word diversification in the passage is closest in meaning to

○emergence of many varieties

○steady decline in number

○gradual increase in body size

○sudden disappearance

Paragraph2: Scientists have asked important questions about this explosion for more than a century. Why did it occur so late in the history of Earth? The origin of multicellular forms of life seems a relatively simple step compared to the origin of life itself. Why does the fossil record not document the series of evolutionary changes during the evolution of animals? Why did animal life evolve so quickly? Paleontologists continue to search the fossil record for answers to these questions.

4. The period discussed in the passage is referred to as an explosion because it

○occurred 0.6 billion years ago, late in Earth's history

○was characterized by the unusually fast evolution of many new life-forms.

○Was characterized by widespread animal extinction

○Was characterized by violent volcanic eruptions

5. According to Paragraph2, which of the following is NOT a question that paleontologists asked about the Cambrian explosion?

○Why was the origin of life a simple step in Earth's history?

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○Why did it take so long for multicellular organisms to develop?

○Why did animal life evolve so rapidly?

○Why does the fossil record lack evidence of animal evolution during that time?

6. Which of the following best describes the relationship between Paragraph2 and Paragraph3?

○Paragraph2 puts forward several scientific claims, one of which is rejected in Paragraph3

○Paragraph2 poses several questions, and Paragraph3offers a possible answer to one of them

○Paragraph2 presents outdated traditional views, while Paragraph3presents the current scientific conclusions.

○Paragraph2 introduces a generalization that is illustrated by specific examples in Paragraph3

Paragraph3: One interpretation regarding the absence of fossils during this important 100-million-year period is that early animals were soft bodied and simply did not fossilize. Fossilization of soft-bodied animals is less likely than fossilization of hard-bodied animals, but it does occur. Conditions that promote fossilization of soft-bodied animals include very rapid covering by sediments that create an environment that discourages decomposition. In fact, fossil beds containing soft-bodied animals have been known for many years.

7. The word promote in the passage is closest in meaning to

○complicate

○prevent

○encourage

○affect

Paragraph4: The Ediacara fossil formation, which contains the oldest known animal fossils, consists exclusively of soft-bodied forms. Although named after a site in Australia, the Ediacara formation is worldwide in distribution and dates to Precambrian times. This 700-million-year-old formation gives few clues to the origins of modern animals, however, because paleontologists believe it represents an evolutionary experiment that failed. It contains no ancestors of modern animal groups.

8. Which of the following is NOT mentioned in Paragraph4 as being true of the Ediacara formation?

○It contains fossils that date back to the Precambrian period.

○It contains only soft-bodied animal fossils.

○It is located on a single site in Australia.

○It does not contain any fossils of the ancestors of modern animals.

Paragraph5: A slightly younger fossil formation containing animal remains is

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the Tommotian formation, named after a locale in Russia. It dates to the very early Cambrian period, and it also contains only soft-bodied forms. At one time, the animals present in these fossil beds were assigned to various modern animal groups, but most paleontologists now agree that all Tommotian fossils represent unique body forms that arose in the early Cambrian period and disappeared before the end of the period, leaving no descendants in modern animal groups.

9. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○The animals found in the Tommotian fossil bed were once thought to belong to a variety of modern animal groups, but now they are thought to have descended from a single group.

○Animals in the Tommotian fossil beds were initially assigned to modern animal groups but are now thought to belong to groups that emerged and died out during the Cambrian period.

○Though at first they thought otherwise, paleontologists now agree that the animals in the Tommotian have body forms from which modern animals have descended.

○It is unclear whether the Tommotian fossils from the early Cambrian period represent unique body forms or whether they should be assigned to various modern animal groups.

Paragraph6: A third fossil formation containing both soft-bodied and hard-bodied animals provides evidence of the result of the Cambrian explosion. This fossil formation, called the Burgess Shale, is in Yoho National Park in the Canadian Rocky Mountains of British Columbia. Shortly after the Cambrian explosion, mud slides rapidly buried thousands of marine animals under conditions that favored fossilization. These fossil beds provide evidence of about 32 modern animal groups, plus about 20 other animal body forms that are so different from any modern animals that they cannot be assigned to any one of the modern groups. These unassignable animals include a large swimming predator called *Anomalocaris* and a soft-bodied animal called *Wiwaxia*, which ate detritus or algae. The Burgess Shale formation also has fossils of many extinct representatives of modern animal groups. For example, a well-known Burgess Shale animal called *Sidneyia* is a representative of a previously unknown group of arthropods (a category of animals that includes insects, spiders, mites, and crabs).

10. Why does the author mention Anomalocans and Wiwaxia?

○To contrast predators with animals that eat plants such as algae

○To question the effects of rapid mud slides on fossilization

○To suggest that much is still unknown about animals found in the Burgess Shale

○To provide examples of fossils that cannot be assigned to a modern animal group

11. Sidneyia is an example of

○a relative of Anomalocaris and Wiwaxia

○a previously unknown Burgess Shale animal

○an extinct member of a currently existing category of animals

○an animal that cannot be assigned to any modern animal group

Paragraph7: Fossil formations like the Burgess Shale show that evolution cannot always be thought of as a slow progression. The Cambrian explosion involved rapid evolutionary diversification, followed by the extinction of many unique animals. Why was this evolution so rapid? No one really knows. Many zoologists believe that it was because so many ecological niches were available with virtually no competition from existing species. Will zoologists ever know the evolutionary sequences in the Cambrian explosion? Perhaps another ancient fossil bed of soft-bodied animals from 600-million-year-old seas is awaiting discovery.

12. What can be inferred from Paragraph7 about why the Cambrian explosion is so unusual?

○It generated new ecological niches through the extinction of many unique animals.

○It was a period of rapid evolution, and evolution is often thought of as a slow process.

○It is a period whose evolutionary sequences are clearly marked.

○It generated a very large number of ancient fossil beds containing soft-bodied

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animals.

Paragraph3: One interpretation regarding the absence of fossils during this important 100-million-year period is that early animals were soft bodied and simply did not fossilize. ■ Fossilization of soft-bodied animals is less likely than fossilization of hard-bodied animals, but it does occur. ■ Conditions that promote fossilization of soft-bodied animals include very rapid covering by sediments that create an environment that discourages decomposition.■ In fact, fossil beds containing soft-bodied animals have been known for many years. ■

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

It is relatively rare because the fossilization of soft-bodied animals requires a special environment.

Where could the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some answer choices do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

The term “Cambrian explosion” refers to the geologically brief period during

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which all modern animal groups evolved.

Answer Choices

○Little is known about the stages of evolution during the Cambrian period, in part because early animals were soft bodied and could fossilize only under particular conditions.

○While animal fossils from before the Cambrian explosion have no modern descendants, many animals that evolved during the Cambrian explosion can be assigned to modern groups.

○The Cambrian period is significant because it marks the emergence of eukaryotic life-forms – organisms that have cells with true nuclei

○The Ediacara fossil formation provides the most information about the Cambrian explosion, while the earlier, Tommotian and Burgess Shale formations give clues about Precambrian evolution.

○Zoologists are awaiting the discovery of a 600-million-year-old fossil formation in order to be able to form a theory of how animal evolution progressed.

○Although the reasons for the rapid evolution of animals during the Cambrian period are not known, one proposed explanation is an abundance of niches with a lack of competitors.

参考答案：

1. ○2
2. ○3
3. ○1
4. ○2
5. ○1
6. ○2
7. ○3
8. ○3
9. ○2
10. ○4
11. ○3
12. ○2
13. ○2
14. ○1, 2, 6

参考译文

寒武纪大爆发

地质年代是由重大地质事件和生物事件标记的，包括四十六亿年前地球的形成、三十五亿年前生命的起源、十五亿年前真核生物（细胞中有真核的生命体）的起源以及六亿年前动物的起源；最近的一个事件标志着寒武纪的开始。动物的起源相对处于地球历史的晚期——仅存在于地球历史时间的十分之一。在短暂的一亿年地质学周期中，所有现代动物群（包括现在已经灭绝的生物）进化了。这次快速的动物起源和分化产生的时期常常被称为“寒武纪大爆发”。

一个多世纪以来，科学家们对这次大爆发一直有疑惑。为什么它发生的得这么晚？多细胞生物的出现相对于生命的出现而言则是一次相对简单的进化。为什么化石没有记录下动物演化的一系列变化呢？为什么动物生命进化得如此迅速呢？古生物学家们仍旧在研究化石记录以期回答这些问题。

关于这重要的一亿年内化石的缺失，有一种解释是早期的动物都是软体动物，他们很难形成化石。软体动物的化石比硬体动物化石少见得多，但是也是可能发生的。促使软体动物成为化石的条件是沉积物的迅速覆盖以形成一个抑制分解的环境。事实上，含有软体动物的化石层在很多年以前就已经为人们所知了。

含有最古老的动物化石的伊迪卡拉化石群就全部由软体动物化石组成。尽管伊迪卡拉是以澳大利亚的一处地名而命名，但是伊迪卡拉沉积层的分布却遍及世界各地，并且可以追溯到前寒武纪时期。这些 7 亿年前形成的地层为现代动物的起源提供了一些新的线索。但是，由于古生物学家们认为它代表着一次失败的进化试验，所以，它并没有包含任何现代动物的祖先。

以俄罗斯的一处地名而命名的 Tommotian 是一层包含动物残骸的较年轻的化石层。它形成于寒武纪的早期，并且同样只含有软体动物化石。在一段时间内，人们认为这些化石中的动物分化出了各种各样的现代动物。但是古生物学家们现在却认为所有的 Tommotian 化石都仅代表在寒武纪初期出现但到寒武纪结束时就消失了的特别生物。所以它们没有在现在动物中留下任何后代。

第三种化石层既包含了软体动物也包含了硬体动物，它为寒武纪大爆发提供了证据。这种叫做伯吉斯页岩化石群就在加拿大的大不列颠哥伦比亚石山上的约霍国家公园内。在寒武纪大爆发后不久，滑落的泥土迅速的掩埋了成千上万的海洋动物，形成了极有利于化石形成的环境。这些化石层含有大约 32 种现代动物，还有大约 20 种与现在动物截然不同以致于不可能分类为任何一种现代动物的其他动物体。这些无法划分的动物包含一种叫做奇虾的肉食动物和一种叫做威瓦亚虫的以岩屑和藻类为食的软体动物。伯吉斯页岩化石群也含有很多现在已经灭绝了的动物化石。例如伯吉斯页岩化石群中的一种著名动物，Sidneyia，就是一种典型的以前还不为

人知的节肢动物（一种动物分类，它包括昆虫、蜘蛛、螨虫和螃蟹）。

像伯吉斯页岩化石群这样的化石层表明进化不能总是被认为是缓慢的过程。寒武纪大爆涉及到了快速的进化分化，接着就是很多独特动物的灭绝。为什么这种进化如此迅速呢？没有人真正的明白。很多动物学家认为这是很多几乎没有任何竞争性物种的环境使然。动物学家们是否知道寒武纪大爆发的动物的进化顺序呢？或许另一些含有来自于 6 亿年前的海洋动物的化石亟待发现。

Powering the Industrial Revolution

In Britain one of the most dramatic changes of the Industrial Revolution was the harnessing of power. Until the reign of George Ⅲ(1760-1820), available sources of power for work and travel had not increased since the Middle Ages. There were three sources of power: animal or human muscles; the wind, operating on sail or windmill; and running water .Only the last of these was suited at all to the continuous operating of machines, and although waterpower abounded in Lancashire and Scotland and ran grain mills as well as textile mills, it had one great disadvantage: streams flowed where nature intended them to and water-driven factories had to be located on their banks whether or not the location was desirable for other reasons. Furthermore even the most reliable waterpower varied with the seasons and disappeared in a drought. The new age of machinery, in short, could not have been born without a new source of both movable and constant power.

The source had long been known but not exploited. Early in the century, a pump had come into use in which expanding steam raised a piston in a cylinder, and atmospheric pressure brought it down again when the steam condensed inside the cylinder to form a vacuum. This “atmospheric engine,” invented by Thomas Savery and vastly improved by his partner Thomas Newcomen, embodied revolutionary principles, but it was so slow and wasteful of fuel that it could not be employed outside the coal mines for which it had been designed. In the 1760s,

James Watt perfected a separate condenser for the steam, so that the cylinder did not have to be cooled at every stroke; then he devised a way to make the piston turn a wheel and thus convert reciprocating (back and forth) motion into rotary motion. He thereby transformed an inefficient pump of limited use into a steam engine of a thousand uses. The final step came when steam was introduced into the cylinder to drive the piston backward as well as forward thereby increasing the speed of the engine and cutting its fuel consumption.

Watt's steam engine soon showed what it could do. It liberated industry from dependence on running water. The engine eliminated water in the mines by driving efficient pumps, which made possible deeper and deeper mining. The ready availability of coal inspired William Murdoch during the 1790s to develop the first new form of nighttime illumination to be discovered in a millennium and a half. Coal gas rivaled smoky oil lamps and flickering candles, and early in the new century, well-to-do Londoners grew accustomed to gaslit houses and even streets. Iron manufacturers which had starved for fuel while depending on charcoal also benefited from ever-increasing supplies of coal; blast furnaces with steam- powered bellows turned out more iron and steel for the new machinery. Steam became the motive force of the Industrial Revolution as coal and iron ore were the raw materials.

By 1800 more than a thousand steam engines were in use in the British Isles, and Britain retained a virtual monopoly on steam engine production until the

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1830s. Steam power did not merely spin cotton and roll iron; early in the new century it also multiplied ten times over the amount of paper that a single worker could produce in a day. At the same time, operators of the first printing presses run by steam rather than by hand found it possible to produce a thousand pages in an hour rather than thirty. Steam also promised to eliminate a transportation problem not fully solved by either canal boats or turnpikes. Boats could carry heavy weights, but canals could not cross hilly terrain; turnpikes could cross the hills, but the roadbeds could not stand up under great weights. These problems needed still another solution, and the ingredients for it lay close at hand. In some industrial regions, heavily laden wagons，with flanged wheels，were being hauled by horses along metal rails; and the stationary steam engine was puffing in the factory and mine. Another generation passed before Inventors succeeded in combining these ingredients by putting the engine on wheels and the wheels on the rails, so as to provide a machine to take the place of the horse. Thus the railroad age sprang from what had already happened in the eighteenth century.

Paragraph 1：In Britain one of the most dramatic changes of the Industrial Revolution was the harnessing of power. Until the reign of George Ⅲ(1760-1820)，available sources of power for work and travel had not increased since the Middle Ages. There were three sources of power：animal or human muscles；the wind, operating on sail or windmill; and running water. Only the last of these was suited at all to the continuous operating of machines, and although

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waterpower abounded in Lancashire and Scotland and ran grain mills as well as textile mills, it had one great disadvantage: streams flowed where nature intended them to and water-driven factories had to be located on their banks whether or not the location was desirable for other reasons. Furthermore, even the most reliable waterpower varied with the seasons and disappeared in a drought, the new age of machinery, in short, could not have been born without a new source of both movable and constant power.

Paragraph 2: The source had long been known but not exploited. Early in the century, a pump had come into use in which expanding steam raised a piston in a cylinder, and atmospheric pressure brought it down again when the steam condensed inside the cylinder to form a vacuum. This "atmospheric engine," invented by Thomas Savery and vastly improved by his partner. Thomas Newcomen, embodied revolutionary principles, but it was so slow and wasteful of fuel that it could not be employed outside the coal mines for which it had been designed. In the 1760s, James Watt perfected a separate condenser for the steam, so that the cylinder did not have to be cooled at every stroke; then he devised a way to make the piston turn a wheel and thus convert reciprocating (back and forth) motion into rotary motion. He thereby transformed an inefficient pump of limited use into a steam engine of a thousand uses. The final step came when steam was introduced into the cylinder to drive the piston backward as well as forward thereby increasing the speed of the engine and cutting its fuel consumption.

1. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○ Running water was the best power source for factories since it could keep machines operating continuously but since it was abundant only in Lancashire and Scotland, most mills and factories that were located elsewhere could not be water driven.

○ The disadvantage of using waterpower is that streams do not necessarily flow in places that are the most suitable for factories which explains why so many water—powered grain and textile mills were located in undesirable places

○ Since machines could be operated continuously only where running water was abundant, grain and textile mills as well as other factories tended to be located only in Lancashire and Scotland.

○ Running water was the only source of power that was suitable for the continuous operation of machines, but to make use of it factories had to be located where the water was, regardless of whether such locations made sense otherwise.

2. Which of the following best describes the relation of paragraph 2 to paragraph 1?

○Paragraph 2 shows how the problem discussed in paragraph 1 arose.

○Paragraph 2 explains how the problem presented in paragraph 1 came to be solved.

○Paragraph 2 provides a more technical discussion of the problem

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introduced in paragraph 1.

○Paragraph 2 shows why the problem discussed in paragraph 1 was especially important to solve.

3. The word exploited in the passage is closest in meaning to

○utilized

○recognized

○examined

○fully understood

4. The word vastly in the passage is closet in meaning to

○quickly

○ultimately

○greatly

○initially

5. According to paragraph 2，the atmospheric engine was slow because

○it had been designed to be used in coal mines

○the cylinder had to cool between each stroke

○it made use of expanding steam to raise the piston in its cylinder

○it could be operated only when a large supply of fuel was available

Paragraph 2: The source had long been known but not exploited. Early in the

century, a pump had come into use in which expanding steam raised a piston in a cylinder，and atmospheric pressure brought it down again when the steam condensed inside the cylinder to form a vacuum. This “atmospheric engine,” invented by Thomas Savery and vastly improved by his partner. Thomas Newcomen, embodied revolutionary principles, but it was so slow and wasteful of fuel that it could not be employed outside the coal mines for which it had been designed. In the 1760s, James Watt perfected a separate condenser for the steam, so that the cylinder did not have to be cooled at every stroke; then he devised a way to make the piston turn a wheel and thus convert reciprocating (back and forth) motion into rotary motion. He thereby transformed an inefficient pump of limited use into a steam engine of a thousand uses. The final step came when steam was introduced into the cylinder to drive the piston backward as well as forward thereby increasing the speed of the engine and cutting its fuel consumption.

6. According to paragraph 2, Watt's steam engine differed from earlier steam engines, in each of the following ways, except:

○ It used steam to move a piston in a cylinder.

○ It worked with greater speed.

○ It was more efficient in its use of fuel.

○ It could be used in many different ways.

Paragraph 3: Watt's steam engine soon showed what it could do. It liberated industry from dependence on running water. The engine eliminated water in the

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mines by driving efficient pumps, which made possible deeper and deeper mining. The ready availability of coal inspired William Murdoch during the 1790s to develop the first new form of nighttime illumination to be discovered in a millennium and a half. Coal gas rivaled smoky oil lamps and flickering candles, and early in the new century, well-to-do Londoners grew accustomed to gaslit houses and even streets. Iron manufacturers which had starved for fuel while depending on charcoal also benefited from ever-increasing supplies of coal; blast furnaces with steam-powered bellows turned out more iron and steel for the new machinery. Steam became the motive force of the Industrial Revolution as coal and iron ore were the raw materials.

7. In paragraph 3 the author mentions William Murdoch's invention of a new form of nighttime illumination in order to

○indicate one of the important developments made possible by the introduction of Watt's steam engine

○make the point that Watt's steam engine was not the only invention of importance to the Industrial Revolution

○illustrate how important coal was as a raw material for the Industrial Revolution

○provide an example of another eighteenth-century invention that used steam as a power source

8. The phrase grew accustomed to in the passage is closest in meaning to

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○began to prefer

○ wanted to have

○ became used to

○ insisted on

Paragraph 4: By 1800 more than a thousand steam engines were in use in the British Isles, and Britain retained a virtual monopoly on steam engine production until the 1830s. Steam power did not merely spin cotton and roll iron; early in the new century it also multiplied ten times over the amount of paper that a single worker could produce in a day. At the same time, operators of the first printing presses run by steam rather than by hand found it possible to produce a thousand pages in an hour rather than thirty. Steam also promised to eliminate a transportation problem not fully solved by either canal boats of turnpikes. Boats could carry heavy weights, but canals could not cross hilly terrain; turnpikes could cross the hills, but the roadbeds could not stand up under great weights. These problems needed still another solution, and the ingredients for it lay close at hand. In some industrial regions, heavily laden wagons, with flanged wheels, were being hauled by horses along metal rails; and the stationary steam engine was puffing in the factory and mine. Another generation passed; before Inventors succeeded in combining these ingredients by putting the engine on wheels and the wheels on the rails, so as to provide a machine to take the place of the horse. Thus the railroad age sprang from what had already happened in the eighteenth century.

9. The word retained in the passage is closest in meaning to

○gained

○established

○profited from

○maintained

10. According to paragraph 4, which of the following statements about steam engines is true?

○They were used for the production of paper but not for printing

○By 1800, significant numbers of them were produced outside of Britain

○They were used in factories before they were used to power trains

○They were used in the construction of canals and turnpikes

11. According to paragraph 4, providing a machine to take the place of the horse involved combining which two previously separate ingredients?

○Turnpikes and canals

○Stationary steam engines and wagons with flanged wheels

○Metal rails in roadbeds and wagons capable of carrying heavy loads

○Canal boats and heavily laden wagons

Paragraph 3: ■Watt's steam engine soon showed what it could do. ■It liberated industry from dependence on running water. ■The engine eliminated water in the mines by driving efficient pumps, which made possible deeper and

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deeper mining. ■The ready availability of coal inspired William Murdoch during the 1790s to develop the first new form of nighttime illumination to be discovered in a millennium and a half.

12.Look at the four squares [■] that indicate where the following sentence could be added to the passage.

The factories did not have to go to the streams when power could come to the factories.

Where would the sentence best fit?

13.The Industrial Revolution would not have been possible without a new source of power that was efficient, movable，and continuously available.

●

●

●

Answer Choices

○In the early eighteenth century, Savery and Newcomen discovered that expanding steam could be used to raise a piston in a cylinder.

○Watt's steam engine played a leading role in greatly increasing industrial production of all kinds.

○Until the 1830s，Britain was the world's major producer of steam engines.

○In the mid-1700s James Watt transformed an inefficient steam pump into a fast，flexible，fuel-efficient engine.

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○In the 1 790s William Murdoch developed a new way of lighting houses and streets using coal gas.

○The availability of steam engines was a major factor in the development of railroads，which solved a major transportation problem.

参考答案：

1. ○4

2. ○2

3. ○1

4. ○3

5. ○2

6. ○1

7. ○1.

8. ○3

9. ○4

10. ○3

11. ○2

12. ○3

13. ○2, 4, 6

参考译文

驱动工业革命

在英国，工业革命带来的最大的变化之一就是动力的运用。从中世纪到乔治三世统治时期，用于劳作及行驶的动力一直没有得到发展。当时的驱动力仅限于三种：动物或人力；风力，用于航行或者风车；流水产生的动力。其中只有水力可以用于支持持续运转的机器，尽管在当时的兰开夏和苏格兰地区水力资源极其丰富，被用于谷物作坊和纺织厂，但这种动力存在一个极大的缺陷：水的流向是由自然因素决定的，因此，不论适不适合工厂选址，利用水利生产的工厂都必须建造在能够提供水资源动力的岸边。再者，即便是最可靠的水资源也会受到季节变化和干旱的影响。总之，没有可持续提供动力并且可移动的能源就没有新机械化时代的产生。

一直以来，人们很早就了解这种能源，不过没能成功开发。在十八世纪早期，泵曾被用于在气缸中使蒸汽推动活塞，气缸内部的蒸汽被压缩形成真空环境，大气压又使得活塞下降，这一由托马斯赛佛瑞发明并由他的同伴托马斯纽科门对其进行改良的“大气引擎”，被赋予了革命性的工作原理。但其效率低下且浪费燃料，无法在煤矿以外的地区使用，这与最初的设计期望背道而驰。十八世纪六十年代，詹姆士瓦特完善了分离的蒸汽冷凝器，因此不必每次活塞运动后都要冷却气缸；随后，他又发明了一种新的方法，使得活塞可以旋转运动，即从原来的往复运动演变成为循环运动，原本效率低下运用范围有限的活塞式结构从此演变成为得到广泛运用的蒸汽模式。最终，蒸汽被运用于汽缸中将活塞推回，从而加快了机器的运转

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速度并降低了能源消耗。

瓦特发明的蒸汽机很快就展现出了它的作用，把依赖水源的工业解放了出来。通过泵将矿井中的水排出，矿井能挖掘得更深。十八世纪末，由威廉默多克引领的煤炭利用，促成了一千五百年以来首例夜间照明设备的诞生。新世纪伊始，煤气在与冒烟的油灯和忽闪的蜡烛的比较中占净优势，经济富裕的伦敦人也开始习惯了煤气家用照明甚至街道照明。依赖于木炭供应的铁匠们亟需燃料，他们也受益于越来越多的煤炭供应。配备有蒸汽动力的鼓风炉使得越来越多的钢铁供应成为可能。蒸汽成为了工业革命中的主要动力，当时的煤矿和铁矿成为了是工业的主要原材料。

十九世纪时，英国已经拥有上千台蒸汽发动机，直到 19 世纪 30 年代以前，英国在蒸汽机的生产方面一直处于实质性垄断地位。蒸汽机不仅可以用于织布、炼铁，19 世纪早期，蒸汽机的使用同样大大提高了造纸的效率，蒸汽动力生产的产量是一个工人一天产量的 10 倍。那时，第一台利用蒸汽发动的印刷机 1 小时就能完成手动印刷机 30 小时完成的工作量。蒸汽动力还实现了运河及收费公路无法完全解决的运输问题。货船的确可以负荷重物，但人们无法利用运河在多山的区域实现运输，虽然利用公路可以穿实现在多山区域的运输，但路面的承载能力有限。这些问题都需要其他解决方法，解决问题所需要的条件其实唾手可得。在一些工业地区，四轮马车用于承载重物，它们配备有带凸的缘轮，通过马力拉车在铁轨上行驶；静止的蒸汽发动机广泛运用于工厂和矿井之中。直到过了一代，另一批发明家们才将这些条件成功组合在一起，给车轮配备上蒸汽动力，让

轮子在铁路上运转，利用机器替代了原有的马。这就是铁路时代从十八世纪既有条件发展起来的过程。

William Smith

In 1769 in a little town in Oxfordshire, England, a child with the very ordinary name of William Smith was born into the poor family of a village blacksmith. He received rudimentary village schooling but mostly he roamed his uncle's farm collecting the fossils that were so abundant in the rocks of the Cotswold hills. When he grew older William Smith taught himself surveying from books he bought with his small savings and at the age of eighteen he was apprenticed to a surveyor of the local parish. He then proceeded to teach himself geology and when he was twenty-four，he went to work for the company that was excavating the Somerset Coal Canal in the south of England.

This was before the steam locomotive, and canal building was at its height. The companies building the canals to transport coal needed surveyors to help them find the coal deposits worth mining as well as to determine the best courses for the canals. This job gave Smith an opportunity to study the fresh rock outcrops created by the newly dug canal. He later worked on similar jobs across the length and breadth of England all the while studying the newly revealed strata and collecting all the fossils he could find. Smith used mail coaches to travel as much as 10000 miles per year. In 1815 he published the first modern geological map “A Map of the Strata of England and Wales with a Part of Scotland”, a map so meticulously researched that it can still be used today.

In 1831 when Smith was finally recognized by the Geological Society of London as the “father of English geology”, it was not only for his maps but also for something even more important. Ever since people had begun to catalog the strata in particular outcrops, there had been the hope that these could somehow be used to calculate geological time. But as more and more accumulations of strata were cataloged in more and more places, it became clear that the sequences of rocks sometimes differed from region to region and that no rock type was ever going to become a reliable time marker throughout the world. Even without the problem of regional differences, rocks present a difficulty as unique time markers Quartz is quartz-a silicon ion surrounded by four oxygen ions-there’s no difference at all between two-million-year-old Pleistocene quartz and Cambrian quartz created

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over 500 million years ago.

As he collected fossils from strata throughout England, Smith began to see that the fossils told a different story from the rocks particularly in the younger strata the rocks were often so similar that he had trouble distinguishing the strata, but he never had trouble telling the fossils apart. While rock between two consistent strata might in one place be shale and in another sandstone, the fossils in that shale or sandstone were always the same. Some fossils endured through so many millions of years that they appear in many strata, but others occur only in a few strata, and a few species had their births and extinctions within one particular stratum. Fossils are thus identifying markers for particular periods in Earth's history.

Not only could Smith identify rock strata by the fossils they contained, he could also see a pattern emerging: certain fossils always appear in more ancient sediments, while others begin to be seen as the strata become more recent. By following the fossils, Smith was able to put all the strata of England's earth into relative temporal sequence. About the same time, Georges Cuvier made the same discovery while studying the rocks around Paris. Soon it was realized that this principle of faunal (animal) succession was valid not only in England or France but virtually everywhere. It was actually a principle of floral succession as well, because plants showed the same transformation through time as did fauna. Limestone may be found in the Cambrian or 300 million years later in the Jurassic

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strata but a trilobite-the ubiquitous marine arthropod that had its birth in the Cambrian-will never be found in Jurassic strata, nor a dinosaur in the Cambrian.

Paragraph 1: In 1769 in a little town in Oxfordshire, England, a child with the very ordinary name of William Smith was born into the poor family of a village blacksmith. He received rudimentary village schooling but mostly he roamed his uncle's farm collecting the fossils that were so abundant in the rocks of the Cotswold hills. When he grew older William Smith taught himself surveying from books he bought with his small savings and at the age of eighteen he was apprenticed to a surveyor of the local parish. He then proceeded to teach himself geology and when he was twenty-four, he went to work for the company that was excavating the Somerset Coal Canal in the south of England.

1. The word rudimentary in the passage is closest in meaning to

○thorough

○strict

○basic

○occasional

2. According to paragraph 1 which of the following statements about William Smith is NOT true?

○Smith learned surveying by reading and by apprenticing for a local

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surveyor

○Smith's family lived in a small English town and possessed little wealth.

○Smith learned about fossils from books he borrowed from his uncle.

○Smith eventually left his village to work on the excavation of an English canal.

Paragraph 2: This was before the steam locomotive, and canal building was at its height. The companies building the canals to transport coal needed surveyors to help them find the coal deposits worth mining as well as to determine the best courses for the canals. This job gave Smith an opportunity to study the fresh rock outcrops created by the newly dug canal. He later worked on similar jobs across the length and breadth of England all the while studying the newly revealed strata and collecting all the fossils he could find. Smith used mail coaches to travel as much as 10000 miles per year. In 1815 he published the first modern geological map "A Map of the Strata of England and Wales with a Part of Scotland", map so meticulously researched that it can still be used today.

3. Which of the following can be inferred from paragraph 2 about canal building?

○ Canals were built primarily in the south of England rather than in other regions.

○ Canal building decreased after the steam locomotive was invented.

○ Canal building made it difficult to study rock strata which often became

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damaged in the process.

○ Canal builders hired surveyors like Smith to examine exposed rock strata.

4.Accordingto paragraph2，which of the following is true of the map published by William Smith?

○It indicates the locations of England's major canals

○It became most valuable when the steam locomotive made rail travel possible

○The data for the map were collected during Smith's work on canals

○It is no longer regarded as a geological masterpiece

5. The word meticulously in the passage is closest in meaning to

○carefully

○quickly

○frequently

○obviously

Paragraph 3: In 1831 when Smith was finally recognized by the Geological Society of London as the "father of English geology", was not only for his maps but also for something even more important. Ever since people had begun to catalog the strata in particular outcrops, there had been the hope that these could somehow be used to calculate geological time. But as more and more

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accumulations of strata were cataloged in more and more places, it became clear that the sequences of rocks sometimes differed from region to region and that no rock type was ever going to become a reliable time marker throughout the world. Even without the problem of regional differences, rocks present a difficulty as unique time markers Quartz is quartz—a silicon ion surrounded by four oxygen ions—there's no difference at all between two-million-year-old Pleistocene quartz and Cambrian quartz created over 500 million years ago.

6. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○The discovery of regional differences in the sequences of rocks led geologists to believe that rock types could someday become reliable time markers.

○Careful analysis of strata revealed that rocks cannot establish geological time because the pattern of rock layers varies from place to place.

○Smith's catalogs of rock strata indicated that the sequences of rocks are different from place to place and from region to region.

○Because people did not catalog regional differences in sequences of rocks. It was believed that rocks could never be reliable time markers

7. Why does the author use the phrase "Quartz is quartz"?

○To describe how the differences between Pleistocene and Cambrian quartz reveal information about dating rocks

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○To point out that the chemical composition of quartz makes it more difficult to date than other rocks

○To provide an example of how regional differences in rock sequences can make a particular rock difficult to date

○To explain that rocks are difficult to use for dating because their chemical compositions always remain the same over time

Paragraph 4: As he collected fossils from strata throughout England, Smith began to see that the fossils told a different story from the rocks. Particularly in the younger strata the rocks were often so similar that he had trouble distinguishing the strata, but he never had trouble telling the fossils apart. While rock between two consistent strata might in one place be shale and in another sandstone, the fossils in that shale or sandstone were always the same . Some fossils endured through so many millions of years that they appear In many strata，but others occur only in a few strata, and a few species had their births and extinctions within one particular stratum. Fossils are thus identifying markers for particular periods in Earth's history.

8.According to paragraph 4，it was difficult for Smith to distinguish rock strata because

○the rocks from different strata closely resembled each other

○he was often unable to find fossils in the younger rock strata

○their similarity to each other made it difficult for him to distinguish one

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rock type from another

○the type of rock between two consistent strata was always the same

9. The word endured in the passage is closest in meaning to

○vanished

○developed

○varied

○survived

Paragraph 5: Not only could Smith identify rock strata by the fossils they contained, he could also see a pattern emerging：certain fossils always appear in more ancient sediments while others begin to be seen as the strata become more recent. By following the fossils, Smith was able to put all the strata of England's earth into relative temporal sequence. About the same time, Georges Cuvier made the same discovery while studying the rocks around Paris. Soon it was realized that this principle of faunal (animal) succession was valid not only in England or France but virtually everywhere. It was actually a principle of floral succession as well, because plants showed the same transformation through time as did fauna. Limestone may be found in the Cambrian or-300 million years later-in the Jurassic strata but a trilobite—the ubiquitous marine arthropod that had its birth in the Cambrian—will never be found in Jurassic strata, nor a dinosaur in the Cambrian.

10. The word “virtually” in the passage is closest in meaning to

○possibly

○absolutely

○surprisingly

○nearly

11. Select the TWO answer choices that are true statements based upon the discussion of the principle of faunal succession in paragraph 5. To receive credit, you must select TWO answers.

○It was a principle that applied to fauna but not to flora.

○It was discovered independently by two different geologists，

○It describes how fossils are distributed in rock strata

○It explains why plants and animals undergo transformations through time.

12. In mentioning "trilobite”, the author is making which of the following points?

○Fossils cannot be found in more than one rock stratum.

○Faunal succession can help put rock layers in relative temporal sequence.

○Faunal succession cannot be applied to different strata composed of the same kind of rock.

○The presence of trilobite fossils makes it difficult to date a rock.

Paragraph 5: Not only could Smith identify rock strata by the fossils they contained, he could also see a pattern emerging: certain fossils always appear in more ancient sediments, while others begin to be seen as the strata become more recent. ■ By following the fossils. Smith was able to put all the strata of England's earth into relative temporal sequence. ■About the same time, Georges Cuvier made the same discovery while studying the rocks around Paris. ■Soon it was realized that this principle of faunal(animal)succession was valid not only in England or France but virtually everywhere. ■It was actually a principle of floral succession as well, because plants showed the same transformation through time as did fauna. Limestone may be found in the Cambrian or-300 million years later-in the Jurassic strata but a trilobite—the ubiquitous marine arthropod that had its birth in the Cambrian—will never be found in Jurassic strata, nor a dinosaur in the Cambrian.

13.Look at the four squares [■] that indicate where the following sentence could be added to the passage

The findings of these geologists inspired others to examine the rock and fossil records in different parts of the world.

Where would the sentence best fit?

14. William Smith's contributions to geology have increased our knowledge of the Each's history.

●

●

●

Answer Choices

○Smith found success easily in his profession because he came from a family of geologists and surveyors.

○Smith's work on canals allowed him to collect fossils and study rock layers all over England.

○Smith found that fossils are much more reliable indicators of geological time than rock strata are.

○Smith was named "the father of English geology" for his maps rather than for his other contributions to the field.

○Smith and Cuvier discovered that fossil patterns are easier to observe in ancient rock strata than in younger rock strata.

○The discovery of the principle of faunal succession allowed geologists to establish the relative age of Earth's rock layers.

参考答案：

1. ○3

2. ○3

3. ○2

4. ○3

5. ○1

6. ○2

7. ○4.

8. ○1

9. ○4

10. ○4

11. ○2, 3

12. ○2

13. ○3

14. ○2, 3, 6

参考译文

威廉·史密斯

在 1769 年英国牛津郡的一个小镇上，一个小男孩出生在村里一户穷铁匠家，他的名字很普通，叫做威廉·史密斯。史密斯只在村里的学校接受了最基本的教育，大部分的时间都是在他叔叔的农场里搜寻化石，这些化石在科茨沃尔德山的岩石里是很常见的。长大后，他开始用微薄的积蓄买书自学测量，18 岁的时，史密斯成为了当地教区测量员的助理。后来，他又自学了地质学，24 岁的时，他开始为挖掘英格兰南部 Somerset Coal 运河那家公司工作。

这些事情都发生在蒸汽火车发明之前，运河建筑正处于顶峰时期。他工作的那家公司致力于开掘一条运河来运输煤矿，需要测量员帮助他们探寻值得挖掘的煤矿所在地，并为他们决定最佳的运河路线。这份工作为史密斯提供了一个机会，使他能够接触和学习那些因为运河开掘而露出地面的新鲜岩层。后来他仍从事类似的工作，行便全国，不断地研究那些新出现的地层，同时收集他所能发现的化石。史密斯乘着邮件马车每年行进将近 10000 英里。1815 年，他绘制了第一张现代地质学地图——英格兰威尔士及苏格兰部分地区地层地图，这张地质地图绘制得非常精确，直到现在仍有参考价值。

到了 1831 年，史密斯最终被伦敦地质学会认可，并赋予他“英国地质学之父”的称号，这不仅仅是因为那张地图，而且是为了其他更重要的

原因。从人们开始对露出地面的特殊岩层进行分类的时候起，大家就开始认为这些岩石可能会以某种方式被用于计算地质年代。但是，随着各地越来越多的岩层积累和分类，岩层顺序也因地区的不同而不同，因此，全世界没有一种特定的岩层能被认作是划分地质年代的标志。即便排除区域差异的影响，人们面对岩石，还是存在一道难题，石英作为一种独特的时间标记——四个氧离子包围一个硅离子的化合物，而两百万年前的更新世石英和五亿年前形成的寒世纪的石英并无差别，这让人们束手无措。

史密斯在全英国的岩层中不断收集化石，后来他发现化石所反映的史实和岩石反映的完全不同，尤其是那些新产生的地层里的岩石，这些岩石非常类似，不易于区分地层。而区分其中的化石对史密斯来说简直就是轻而易举。在同层的地层中发现的岩石可能在这片地层中属于泥板岩，而在另一片地层中可能是砂岩，而在那些泥板岩或者砂岩中的化石往往都是一样的。有的化石经历了数百年万之久，它们存在于很多地层中间，但有的化石只存在于部分地层，还有一部分化石从出现至灭绝都只出现在一个特定的岩层中。因此，化石才是真正划分地球历史特定年代的指针。

史密斯不仅可以通过岩石中包含的化石来识别地层，而且可以看出他们显露出来的模式：一些特定的化石往往出现在更为久远的沉积物当中，而其他的化石则可以在距今年代较近的地层中发现。通过追踪化石，史密斯将英国范围内所有的地层进行了彼此出现时间的排序。同时，乔治居维叶在研究巴黎周围的岩石时也作出了同样的发现。很快人们就开始认识到，这种动物物种的延续性是符合逻辑的，不仅仅是在英国、法国，而实际上

在全世界范围都是适用的。事实上，这一原则同样适用于证实植物的延续性，因为植物和动物一样，它们的化石也显示了时间的推移。人类有可能在侏罗纪时期的地层中发现寒世纪或者三亿年后的石灰岩，但绝不可能在侏罗纪时期地层中发现三叶虫化石（三叶虫是寒世纪非常普遍的水生节肢动物），也不可能发现寒世纪时期的恐龙化石。

Infantile Amnesia

What do you remember about your life before you were three? Few people can remember anything that happened to them in their early years. Adults' memories of the next few years also tend to be scanty. Most people remember only a few events-usually ones that were meaningful and distinctive，such as being hospitalized or a sibling's birth.

How might this inability to recall early experiences be explained? The sheer passage of time does not account for it; adults have excellent recognition of pictures of people who attended high school with them 35 years earlier. Another seemingly plausible explanation-that infants do not form enduring memories at this point in development-also is incorrect. Children two and a half to three years old remember experiences that occurred in their first year, and eleven month olds remember some events a year later. Nor does the hypothesis that infantile amnesia reflects repression- or holding back- of sexually charged episodes explain the phenomenon. While such repression may occur，people cannot remember ordinary events from the infant and toddler periods either.

Three other explanations seem more promising. One involves physiological changes relevant to memory. Maturation of the frontal lobes of the brain continues throughout early childhood, and this part of the brain may be critical for remembering particular episodes in ways that can be retrieved later.

Demonstrations of infants' and toddlers' long-term memory have involved their repeating motor activities that they had seen or done earlier，such as reaching in the dark for objects, putting a bottle in a doll's mouth, or pulling apart two pieces of a toy. The brain's level of physiological maturation may support these types of memories，but not ones requiring explicit verbal descriptions.

A second explanation involves the influence of the social world on children's language use. Hearing and telling stories about events may help children store information in ways that will endure into later childhood and adulthood. Through hearing stories with a clear beginning，middle, and ending children may learn to extract the gist of events in ways that they will be able to describe many years later. Consistent with this view parents and children increasingly engage in discussions of past events when children are about three years old. However, hearing such stories is not sufficient for younger children to form enduring memories. Telling such stories to two year olds does not seem to produce long-lasting verbalizable memories.

A third likely explanation for infantile amnesia involves incompatibilities between the ways in which infants encode information and the ways in which older children and adults retrieve it. Whether people can remember an event depends critically on the fit between the way in which they earlier encoded the information and the way in which they later attempt to retrieve it. The better able the person is to reconstruct the perspective from which the material was encoded, the more

likely that recall will be successful.

This view is supported by a variety of factors that can create mismatches between very young children's encoding and older children's and adults' retrieval efforts. The world looks very different to a person whose head is only two or three feet above the ground than to one whose head is five or six feet above it, 0lder children and adults often try to retrieve the names of things they saw, but infants would not have encoded the information verbally. General knowledge of categories of events such as a birthday party or a visit to the doctor's office helps older individuals encode their experiences, but again, infants and toddlers are unlikely to encode many experiences within such knowledge structures.

These three explanations of infantile amnesia are not mutually exclusive: indeed, they support each other. Physiological immaturity may be part of why infants and toddlers do not form extremely enduring memories, even when they hear stories that promote such remembering in preschoolers. Hearing the stories may lead preschoolers to encode aspects of events that allow them to form memories they can access as adults. Conversely, improved encoding of what they hear may help them better understand and remember stories and thus make the stories more useful for remembering future events. Thus, all three explanations--physiological maturation, hearing and producing stories about past events, and improved encoding of key aspects of events--seem likely to be involved in overcoming Infantile amnesia.

Paragraph 2: How might this inability to recall early experiences be explained? The sheer passage of time does not account for it; adults have excellent recognition of pictures of people who attended high school with them 35 years earlier. Another seemingly plausible explanation--that infants do not form enduring memories at this point in development-also is incorrect. Children two and a half to three years old remember experiences that occurred in their first year, and eleven month olds remember some events a year later. Nor does the hypothesis that infantile amnesia reflects repression---or holding back—of sexually charged episodes explain the phenomenon. While such repression may occur，people cannot remember ordinary events from the infant and toddler periods either.

1. What purpose does paragraph 2 serve in the larger discussion of children's inability to recall early experiences?

○To argue that the ones that are not substantiated by evidence should generally be considered unreliable

○To argue that the hypotheses mentioned in paragraph 2 have been more thoroughly researched than have the theories mentioned later in the passage

○To explain why some theories about infantile amnesia are wrong before presenting ones more likely to be true

○To explain why infantile amnesia is of great interest to researchers

2. The word plausible in the passage is closest in meaning to

○flexible

○believable

○debatable

○predictable

3. The word phenomenon in the passage is closest in meaning to

○exception

○ repetition

○occurrence

○idea

4.All of the following theories about the inability to recall early experiences are rejected in paragraph 2 EXCEPT:

○The ability to recall an event decreases as the time after the event increases.

○Young children are not capable of forming memories that last for more than a short time.

○People may hold back sexually meaningful memories.

○Most events in childhood are too ordinary to be worth remembering.

Paragraph 3: Three other explanations seem more promising. One involves physiological changes relevant to memory. Maturation of the frontal lobes of the

brain continues throughout early childhood. And this part of the brain may be critical for remembering particular episodes in ways that can be retrieved later. Demonstrations of infants' and toddlers' long-term memory have involved their repeating motor activities that they had seen or done earlier，such as reaching in the dark for objects, putting a bottle in a doll's mouth, or pulling apart two pieces of a toy. The brain's level of physiological maturation may support these types of memories，but not ones requiring explicit verbal descriptions.

5. What does paragraph 3 suggest about long-term memory in children?

○Maturation of the frontal lobes of the brain is important for the long-term memory of motor activities but not verbal descriptions.

○Young children may form long-term memories of actions they see earlier than of things they hear or are told.

○Young children have better long-term recall of short verbal exchanges than of long ones.

○Children's long-term recall of motor activities increases when such activities are accompanied by explicit verbal descriptions

Paragraph 4: A second explanation involves the influence of the social world on children's language use. Hearing and telling stories about events may help children store information in ways that will endure into later childhood and adulthood. Through hearing stories with a clear beginning，middle, and ending children may learn to extract the gist of events in ways that they will be able to

describe many years later. Consistent with this view parents and children increasingly engage in discussions of past events when children are about three years old. However, hearing such stories is not sufficient for younger children to form enduring memories. Telling such stories to two year olds does not seem to produce long-lasting verbalizable memories.

6.According to paragraph 4，what role may storytelling play in forming childhood memories?

○It may encourage the physiological maturing of the brain

○It may help preschool children tell the difference between ordinary and unusual memories.

○It may help preschool children retrieve memories quickly.

○It may provide an ordered structure that facilitates memory retrieval

Paragraph 5: A third likely explanation for infantile amnesia involves incompatibilities between the ways In which infants encode information and the ways in which older children and adults retrieve it. Whether people can remember an event depends critically on the fit between the way in which they earlier encoded the information and the way in which they later attempt to retrieve it. The better able the person is to reconstruct the perspective from which the material was encoded, the more likely that recall will be successful.

7. The word critically in the passage is closest in meaning to

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○fundamentally

○partially

○consistently

○subsequently

8. The word “perspective” in the passage is closest in meaning to

○ system

○ theory

○ source

○ viewpoint

Paragraph 6: This view is supported by a variety of factors that can create mismatches between very young children's encoding and older children's and adults' retrieval efforts. The world looks very different to a person whose head is only two or three feet above the ground than to one whose head is five or six feet above it, 0lder children and adults often try to retrieve the names of things they saw, but infants would not have encoded the information verbally. General knowledge of categories of events such as a birthday party or a visit to the doctor's office helps older individuals encode their experiences, but again, infants and toddlers are unlikely to encode many experiences within such knowledge structures.

9. The phrase “This view” in the passage refers to the belief that

○the ability to retrieve a memory partly depends on the similarity between the encoding and retrieving process

○the process of encoding information is less complex for adults than it is for young adults and infants

○infants and older children are equally dependent on discussion of past events for the retrieval of information

○infants encode information in the same way older children and adults do

10.According to paragraphs 5 and 6，one disadvantage very young children face in processing information is that they cannot

○process a lot of information at one time

○organize experiences according to type

○block out interruptions

○interpret the tone of adult language

Paragraph 7: These three explanations of infantile amnesia are not mutually exclusive：indeed, they support each other. Physiological immaturity may be part of why infants and toddlers do not form extremely enduring memories, even when they hear stories that promote such remembering in preschoolers. Hearing the stories may lead preschoolers to encode aspects of events that allow them to form memories they can access as adults．Conversely，improved encoding of what they hear may help them better understand and remember stories and thus make the stories more useful for remembering future events. Thus, all three explanations--

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physiological maturation hearing and producing stories about past events，and improved encoding of key aspects of events--seem likely to be involved in overcoming infantile amnesia.

11. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○Incomplete physiological development may partly explain why hearing stories does not improve long-term memory in infants and toddlers

○One reason why preschoolers fail to comprehend the stories they hear is that they are physiologically immature

○Given the chance to hear stories，infants and toddlers may form enduring memories despite physiological immaturity.

○Physiologically mature children seem to have no difficulty remembering stories they heard as preschoolers.

12. How does paragraph 7 relate to the earlier discussion of infantile amnesia?

○It introduces a new theory about the causes of infantile amnesia.

○It argues that particular theories discussed earlier in the passage require further research.

○It explains how particular theories discussed earlier in the passage may work in combination.

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○It evaluates which of the theories discussed earlier is most likely to be true.

Paragraph 1: What do you remember about your life before you were three? ■Few people can remember anything that happened to them in their early years. ■Adults' memories of the next few years also tend to be scanty. ■Most people remember only a few events--usually ones that were meaningful and distinctive，such as being hospitalized or a sibling's birth. ■

13.Look at the four squares[■]that indicate where the following sentence could be added to the passage

Other important occasions are school graduations and weddings.

Where would the sentence best fit?

14. There are several possible explanations why people cannot easily remember their early childhoods.

●

●

●

Answer Choices

○Preschoolers typically do not recall events from their first year.

○Frontal lobe function of the brain may need to develop before memory

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retrieval can occur.

○Children recall physical activities more easily if they are verbalized.

○The opportunity to hear chronologically narrated stories may help three-year-old children produce long-lasting memories.

○The content of a memory determines the way in which it is encoded

○The contrasting ways in which young children and adults process information may determine their relative success in remembering.

参考答案：

1. ○3

2. ○2

3. ○3

4. ○4

5. ○2

6. ○4

7. ○1

8. ○4

9. ○1

10. ○2

11. ○1

12. ○3

13. ○4

14. ○2, 4, 6

参考译文

婴幼儿健忘症

三岁前生活中发生事情你还记得多少？很少有人能记得婴幼儿时期曾经发生在他们身上的事情。成年人对三岁之后那几年的记忆也很稀疏。大部分人只记得那些很少的特殊的事情，比如住院或者弟弟妹妹的出生。

人们无法回忆起幼年事情的现象该如何解释呢？恐怕时间的流逝无法阐述清楚，成年人对 35 年前的高中同学照片仍可进行清楚地辨认。一种看似合理的解释认为，婴儿时期，孩子正在发展对发生的事情尚未形成永久性记忆，这种说法并不准确。两岁半到三岁的孩子能够记得他们一岁时候的事情，比他们大 11 个月的孩子也记得一年前的事情。那些假设婴幼儿健忘症反映了孩子们对充满性欲的插曲的压制和隐藏，同样也解释不通。这种压制发生的时候，人们连孩提时代最普通的事情都是无法回忆起来的。

除此之外的三种解释似乎更具说服力。一种观点认涉及记忆相关的生理变化。孩子们早期的童年时代中，脑前叶不断地成熟，它对记忆发生的特殊事件以及之后对这些事情的回想起着至关重要的作用。婴幼儿长期记忆的形成，还会涉及到他们之前早期看到的或者自身经历的活动的重复，比如：到黑暗的环境里取东西，把瓶子塞到了洋娃娃的嘴里，或者将玩具撕成两半等。除了那些需要清晰语言描述的事件之外，大脑生理成熟的程度足以帮助他们记得这些特殊事件。

第二种观点与社会环境对孩子运用语言的影响有关。听故事和讲故事将有助于储存信息，直到他们的童年和成年。听故事的时候有个清晰的开头、情节和结尾会帮助孩子们提取事件的要点，并且使他们在过了很多年以后仍然可以描述这些事情。越来越多的家长们会在孩子三岁左右的时候和他们讨论过去发生的事情，这也与该理论一致。然而，仅仅听这些故事还是不足以帮他们形成永久的记忆。给两岁的孩子讲故事，并不能使他们形成语言化的记忆。

第三种可能的解释认为婴幼儿健忘症与婴儿储存信息的方式和成年后进行回忆的方式不相容有关。人们是否能够回忆起一件事情的关键在于这两种方式的匹配程度。两种方式越匹配，越有助于人们成功回忆之前发生的事情。

事实上，很多因素会导致婴幼儿储存信息的方式和成年人进行回忆的方式不匹配。对于一个头离地面两三尺的孩子来说，这个世界与那些稍大点的孩子眼中的世界不尽相同。长大后的孩子和成人经常试图回忆那些他们曾经见过的事物的名字，但在他们的幼儿时期时尚未对此进行语言化的信息储存。人们对类似生日聚会或者拜访医生诊所类似事件的分类常识有助于人们记忆他们的经历，但是，婴幼儿时期的孩子们似乎缺乏这些知识结构来帮助他们储存信息。

以上三种关于幼儿期遗忘的解释实际上并非互斥，他们是相互支持的。

学龄前孩子听到那些可以促进他们回忆的故事时，生理上的不成熟是导致他们无法形成长久记忆的原因之一。听那些故事将有助于学龄前孩子在脑中储存已经发生的事情，以便形成他们可以像成年人那样自由提取的记忆。相反，将他们听到的故事进行更进一步的编码将有助于他们更好地理解和记忆，因此，那些故事将对他们记住将来发生的事情更有帮助。综上所述，生理上的成熟、听故事和讲故事以及改进对事件关键信息的编码都有助于克服婴幼儿遗忘症。

The Geologic History of the Mediterranean

In 1970 geologists Kenneth J. Hsu and William B.F. Ryan were collecting research data while aboard the oceanographic research vessel Glomar Challenger. An objective of this particular cruise was to investigate the floor of the Mediterranean and to resolve questions about its geologic history. One question was related to evidence that the invertebrate fauna (animals without spines) of the Mediterranean had changed abruptly about 6 million years ago. Most of the older organisms were nearly wiped out, although a few hardy species survived. A few managed to migrate into the Atlantic. Somewhat later, the migrants returned, bringing new species with them. Why did the near extinction and migrations occur?

Another task for the Glomar Challenger's scientists was to try to determine the origin of the domelike masses buried deep beneath the Mediterranean seafloor. These structures had been detected years earlier by echo-sounding instruments, but they had never been penetrated in the course of drilling. Were they salt domes such as are common along the United States Gulf Coast, and if so, why should there have been so much solid crystalline salt beneath the floor of the Mediterranean?

With question such as these clearly before them, the scientists aboard the Glomar Challenger processed to the Mediterranean to search for the answers. On

August 23, 1970, they recovered a sample. The sample consisted of pebbles of gypsum and fragments of volcanic rock. Not a single pebble was found that might have indicated that the pebbles came from the nearby continent. In the days following, samples of solid gypsum were repeatedly brought on deck as drilling operations penetrated the seafloor. Furthermore, the gypsum was found to possess peculiarities of composition and structure that suggested it had formed on desert flats. Sediment above and below the gypsum layer contained tiny marine fossils, indicating open-ocean conditions. As they drilled into the central and deepest part of the Mediterranean basin, the scientists took solid, shiny, crystalline salt from the core barrel. Interbedded with the salt were thin layers of what appeared to be windblown silt.

The time had come to formulate a hypothesis. The investigators theorized that about 20 million years ago, the Mediterranean was a broad seaway linked to the Atlantic by two narrow straits. Crustal movements closed the straits, and the landlocked Mediterranean began to evaporate. Increasing salinity caused by the evaporation resulted in the extermination of scores of invertebrate species. Only a few organisms especially tolerant of very salty conditions remained. As evaporation continued, the remaining brine (salt water) became so dense that the calcium sulfate of the hard layer was precipitated. In the central deeper part of the basin, the last of the brine evaporated to precipitate more soluble sodium chloride (salt). Later, under the weight of overlying sediments, this salt flowed plastically upward to form salt domes. Before this happened, however, the Mediterranean

was a vast desert 3,000 meters deep. Then, about 5.5 million years ago came the deluge. As a result of crustal adjustments and faulting, the Strait of Gibraltar, where the Mediterranean now connects to the Atlantic, opened, and water cascaded spectacularly back into the Mediterranean. Turbulent waters tore into the hardened salt flats, broke them up, and ground them into the pebbles observed in the first sample taken by the Challenger. As the basin was refilled, normal marine organisms returned. Soon layer of oceanic ooze began to accumulate above the old hard layer.

The salt and gypsum, the faunal changes, and the unusual gravel provided abundant evidence that the Mediterranean was once a desert.

gypsum: a mineral made of calcium sulfate and water

Paragraph 1: In 1970 geologists Kenneth J. Hsu and William B.F. Ryan were collecting research data while aboard the oceanographic research vessel Glomar Challenger. An objective of this particular cruise was to investigate the floor of the Mediterranean and to resolve questions about its geologic history. One question was related to evidence that the invertebrate fauna (animals without spines) of the Mediterranean had changed abruptly about 6 million years ago. Most of the older organisms were nearly wiped out, although a few hardy species survived. A few managed to migrate into the Atlantic. Somewhat later, the migrants returned,

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bringing new species with them. Why did the near extinction and migrations occur?

1. The word "objective" in the passage is closest in meaning to

○achievement

○requirement

○purpose

○feature

2. Which of the following is NOT mentioned in paragraph 1 as a change that occurred in the fauna of the Mediterranean?

○Most invertebrate species disappeared during a wave of extinctions.

○A few hardy species wiped out many of the Mediterranean's invertebrates.

○Some invertebrates migrated to Atlantic Ocean.

○New species of fauna populated the Mediterranean when the old migrants returned.

Paragraph 3: With question such as these clearly before them, the scientists aboard the Glomar Challenger processed to the Mediterranean to search for the answers. On August 23, 1970, they recovered a sample. The sample consisted of pebbles of gypsum and fragments of volcanic rock. Not a single pebble was found that might have indicated that the pebbles came from the nearby continent. In the days following, samples of solid gypsum were repeatedly brought on deck as

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drilling operations penetrated the seafloor. Furthermore, the gypsum was found to possess peculiarities of composition and structure that suggested it had formed on desert flats. Sediment above and below the gypsum layer contained tiny marine fossils, indicating open-ocean conditions. As they drilled into the central and deepest part of the Mediterranean basin, the scientists took solid, shiny, crystalline salt from the core barrel. Interbedded with the salt were thin layers of what appeared to be windblown silt.

3. What does the author imply by saying "Not a single pebble was found that might have indicated that the pebbles came from the nearby continent"?

○The most obvious explanation for the origin of the pebbles was not supported by the evidence.

○The geologists did not find as many pebbles as they expected.

○The geologists were looking for a particular kind of pebble.

○The different pebbles could not have come from only one source.

4. Which of the following can be inferred from paragraph 3 about the solid gypsum layer?

○It did not contain any marine fossil.

○It had formed in open-ocean conditions.

○It had once been soft, deep-sea mud.

○It contained sediment from nearby deserts.

5. Select the TWO answer choice from paragraph 3 that identify materials discovered in the deepest part of the Mediterranean basin. To receive credit you must select TWO answers.

○Volcanic rock fragments.

○Thin silt layers

○Soft, deep-sea mud

○Crystalline salt

6. What is the main purpose of paragraph 3?

○To describe the physical evidence collected by Hsu and Ryan.

○To explain why some of the questions posed earlier in the passage could not be answered by the findings of the Glomar Challenger.

○To evaluate techniques used by Hsu and Ryan to explore the sea floor.

○To describe the most difficult problems faced by the Glomar Challenger expedition.

Paragraph 4: The time had come to formulate a hypothesis. The investigators theorized that about 20 million years ago, the Mediterranean was a broad seaway linked to the Atlantic by two narrow straits. Crustal movements closed the straits, and the landlocked Mediterranean began to evaporate. Increasing salinity caused by the evaporation resulted in the extermination of scores of invertebrate species. Only a few organisms especially tolerant of very salty conditions remained. As evaporation continued, the remaining brine (salt water) became so dense that the

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7. According to paragraph 4, which of the following was responsible for the evaporation of the Mediterranean's waters?

○The movements of Earth's crust

○The accumulation of sediment layers

○Changes in the water level of the Atlantic Ocean

○Changes in Earth's temperature

8. The word "scores" in the passage is closest in meaning to

○members

○large numbers

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○populations

○different types

9. According to paragraph 4, what caused most invertebrate species in the Mediterranean to become extinct?

○The evaporation of chemicals necessary for their survival

○Crustal movements that connected the Mediterranean to the saltier Atlantic

○The migration of new species through the narrow straits

○Their inability to tolerate the increasing salt content of the Mediterranean

10. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○The strait of Gibraltar reopened when the Mediterranean and the Atlantic became connected and the cascades of water from one sea to the other caused crustal adjustments and faulting.

○The Mediterranean was dramatically refilled by water from the Atlantic when crustal adjustments and faulting opened the Strait of Gibraltar, the place where the two seas are joined.

○The cascades of water from the Atlantic to the Mediterranean were not as spectacular as the crustal adjustments and faulting that occurred when the Strait of Gibraltar was connected to those seas.

○As a result of crustal adjustments and faulting and the creation of the

Strait of Gibraltar, the Atlantic and Mediterranean were connected and became a single sea with spectacular cascades of water between them.

11. The word "Turbulent" in the passage is closest in meaning to

○fresh

○deep

○violent

○temperate

Paragraph 2 ■Another task for the Glomar Challenger's scientists was to try to determine the origin of the domelike masses buried deep beneath the Mediterranean seafloor. ■These structures had been detected years earlier by echo-sounding instruments, but they had never been penetrated in the course of drilling. ■Were they salt domes such as are common along the United States Gulf Coast, and if so, why should there have been so much solid crystalline salt beneath the floor of the Mediterranean? ■

12. Look at the four squares ■ that indicate where the following sentence could be added to the passage.

Thus, scientists had information about the shape of the domes but not about their chemical composition and origin.

Where would the sentence best fit?

13. Direction: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. **This question is worth 2 points.**

An expedition to the Mediterranean answered some long-standing questions about the ocean's history.

●

●

●

Answer choices

○The Glomar Challenger expedition investigated changes in invertebrate fauna and some unusual geologic features.

○Researchers collected fossils to determine which new species migrated from the Atlantic with older species.

○Scientists aboard the Glomar Challenger were the first to discover the existence of domelike masses underneath the seafloor.

○Samples recovered from the expedition revealed important differences in chemical composition and fossil distribution among the sediment layers.

○Evidence collected by the Glomar Challenger supports geologists' beliefs that the Mediterranean had evaporated and become a desert, before it refilled with water.

○Mediterranean salt domes formed after crustal movements opened the straits between the Mediterranean and the Atlantic, and the Mediterranean refilled with water.

参考答案：

1.○ 3

2.○ 2

3.○ 1

4.○ 1

5.○ 2, 4

6.○ 1

7.○ 1

8○ 2

9.○ 4

10.○ 2

11.○ 3

12.○ 3

13.○ 1, 4, 5

参考译文

地中海的地质历史

1970 年，地理学家 Kenneth J. Hsu 和 William B.F. Ryan 曾在海洋调查船 Glomar Challenger 号上致力收集调研资料。这次特别巡航的一个目的是调查地中海的地层以及解决关于其地质历史的问题。其中一个问题是有关地中海地区无脊椎动物（没有脊椎的动物）600 百万年前发生剧变的证据。大部分古老的生物都几乎灭绝了，尽管一些顽强的种类得以生存。一些动物成功地迁移到了大西洋。不久后，这些动物又回来了，并带回来新的物种。为什么这最近的动物灭绝和迁移会发生呢？

Glomar Challenger 号上科学家们的另一个任务是尝试去确定深埋在地中海海底穹顶状巨块的起源。这些结构在早些年被回声探测器探测过，但是它们在探测过程中从未被穿透。它们是像美国海湾海岸一带的含盐圆顶状巨块吗？如果是的话，为什么在地中海海底之下会有这么多坚硬的结晶盐呢？

带着这些清楚摆在他们面前的问题，科学家们登上 Glomar Challenger 号前往地中海寻找答案。1970 年 8 月 23 日，他们恢复了一个样本。这个样本由石膏鹅卵石和火山岩碎块组成。周围没有鹅卵石被发现，这可能说明这些小石头不来自附近的大陆。接下来的日子里，随着海底岩层穿透实验的进行，石膏固体样本被不断地放在甲板上。而且，这些膏状物的组成和结构特性表明它们形成于沙漠。在石膏层上下的沉积物中包含了微小的

海洋生物化石，这说明了是开放性的海洋环境。当钻到地中海盆地中心的最深处时，科学家们从钻管中获得了坚实的、光亮的结晶盐。跟结晶盐相互嵌在一起的薄层像是被风吹起的泥沙层。

时间明确地阐明了一个假设。调查者们构思了这样的理论：大约 2000 万年前，地中海是一条宽阔的航道，它通过两条狭窄的海峡与大西洋连接。地壳运动封闭了海峡，被陆地包围的地中海也开始蒸发。由蒸发引起的越来越高的盐度造成无脊椎动物种类的灭绝。只有一些能抵抗高盐度条件的物种保留下来。随着蒸发的继续进行，盐水浓度太高以致硬地层的硫酸钙发生沉淀。在盆地的中间深处，剩余盐水的持续蒸发形成更多的可溶的氯化钠（盐）。后来，在上层沉淀物的重压下，盐向上形成了含盐的圆顶。然而在这之前，地中海是一个 3000 米深的大沙漠。然后，550 万年前发生了洪水。作为地壳调整和断层作用的结果，现在连接地中海和大西洋的直布罗陀海峡打开了，水流像瀑布一样壮观地涌回地中海。湍急的水流冲击并摧毁了坚硬的含盐层，使把它们磨成了 Challenger 号获得的第一份样品中所观察到的鹅卵石。随着盆地的填充，普通的海洋生物又回来了。不久后海洋软泥层开始在老的硬地层上堆积。

盐、石膏、动物区系的变更，还有不寻常的沙砾层都为地中海曾经是块沙漠的理论提供了充分的证据。

Ancient Rome and Greece

There is a quality of cohesiveness about the Roman world that applied neither to Greece nor perhaps to any other civilization, ancient or modern. Like the stone of Roman wall, which were held together both by the regularity of the design and by that peculiarly powerful Roman cement, so the various parts of the Roman realm were bonded into a massive, monolithic entity by physical, organizational, and psychological controls. The physical bonds included the network of military garrisons, which were stationed in every province, and the network of stone-built roads that linked the provinces with Rome. The organizational bonds were based on the common principles of law and administration and on the universal army of officials who enforced common standards of conduct. The psychological controls were built on fear and punishment—on the absolute certainty that anyone or anything that threatened the authority of Rome would be utterly destroyed.

The source of Roman obsession with unity and cohesion may well have lain in the pattern of Rome's early development. Whereas Greece had grown from scores of scattered cities, Rome grew from one single organism. While the Greek world had expanded along the Mediterranean seas lanes, the Roman world was assembled by territorial conquest. Of course, the contrast is not quite so stark: in Alexander the Great the Greeks had found the greatest territorial conqueror of all time; and the Romans, once they moved outside Italy, did not fail to learn the lessons of sea power. Yet the essential difference is undeniable. The Key to the

Greek world lay in its high-powered ships; the key to Roman power lay in its marching legions. The Greeks were wedded to the sea; the Romans, to the land. The Greek was a sailor at heart; the Roman, a landsman.

Certainly, in trying to explain the Roman phenomenon, one would have to place great emphasis on this almost instinct for the territorial imperative. Roman priorities lay in the organization, exploitation, and defense of their territory. In all probability it was the fertile plain of Latium, where the Latins who founded Rome originated, that created the habits and skills of landed settlement, landed property, landed economy, landed administration, and a land-based society. From this arose the Roman genius for military organization and orderly government. In turn, a deep attachment to the land, and to the stability which rural life engenders, fostered the Roman virtues: gravitas, a sense of responsibility, peitas, a sense of devotion to family and country, and iustitia, a sense of the natural order.

Modern attitudes to Roman civilization range from the infinitely impressed to the thorough disgusted. As always, there are the power worshippers, especially among historians, who are predisposed to admire whatever is strong, who feel more attracted to the might of Rome than to the subtlety of Greece. At the same time, there is a solid body of opinion that dislikes Rome. For many, Rome is at best the imitator and the continuator of Greece on a larger scale. Greek civilization had quality; Rome, mere quantity. Greece was the inventor; Rome, the research and development division. Such indeed was the opinion of some of the more

intellectual Romans." had the Greeks held novelty in such disdain as we," asked Horace in his epistle, "what work of ancient date would now exist?"

Rome's debt to Greece was enormous. The Romans adopted Greek religion and moral philosophy. In literature, Greek writers were consciously used as models by their Latin successors. It was absolutely accepted that an educated Roman should be fluent in Greek. In speculative philosophy and the sciences, the Romans made virtually no advance on early achievements.

Yet it would be wrong to suggest that Rome was somehow a junior partner in Greco-Roman civilization. The Roman genius was projected into new spheres—especially into those of law, military organization, administration, and engineering. Moreover, the tensions that arose within the Roman state produced literary and artistic sensibilities of the highest order. It was no accident that many leading Roman soldiers and statesmen were writers of high caliber.

Paragraph 1: There is a quality of cohesiveness about the Roman world that applied neither to Greece nor perhaps to any other civilization, ancient or modern. Like the stone of Roman wall, which were held together both by the regularity of the design and by that peculiarly powerful Roman cement, so the various parts of the Roman realm were bonded into a massive, monolithic entity by physical, organizational, and psychological controls. The physical bonds

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included the network of military garrisons, which were stationed in every province, and the network of stone-built roads that linked the provinces with Rome. The organizational bonds were based on the common principles of law and administration and on the universal army of officials who enforced common standards of conduct. The psychological controls were built on fear and punishment—on the absolute certainty that anyone or anything that threatened the authority of Rome would be utterly destroyed.

1. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○The regularity and power of stone walls inspired Romans attempting to unify the parts of their realm.

○Although the Romans used different types of designs when building their walls, they used regular controls to maintain their realm.

○Several types of control united the Roman realm, just as design and cement held Roman walls together.

○Romans built walls to unite the various parts of their realm into a single entity, which was controlled by powerful laws.

2. According to paragraph 1, all of the following are controls that held together the roman world EXCEPT

○administrative and legal systems

○the presence of the military

○a common language

○transportation networks

Paragraph 2: The source of Roman obsession with unity and cohesion may well have lain in the pattern of Rome's early development. Whereas Greece had grown from scores of scattered cities, Rome grew from one single organism. While the Greek world had expanded along the Mediterranean seas lanes, the Roman world was assembled by territorial conquest. Of course, the contrast is not quite so stark: in Alexander the Great the Greeks had found the greatest territorial conqueror of all time; and the Romans, once they moved outside Italy, did not fail to learn the lessons of sea power. Yet the essential difference is undeniable. The Key to the Greek world lay in its high-powered ships; the key to Roman power lay in its marching legions. The Greeks were wedded to the sea; the Romans, to the land. The Greek was a sailor at heart; the Roman, a landsman.

3. The phrase "obsession with" in the passage is closest in meaning to

○thinking about

○fixation on

○interest in

○attitude toward

4. According to paragraph 2, which of the following was NOT characteristic

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of Rome's early development?

- ○Expansion by sea invasion
- ○Territorial expansion
- ○Expansion from one original settlement
- ○Expansion through invading armies

5. Why does the author mention "Alexander the Great" in the passage?

- ○To acknowledge that Greek civilization also expanded by land conquest
- ○To compare Greek leaders to Roman leaders
- ○To give an example of Greek leader whom Romans studied
- ○To indicate the superior organization of the Greek military

Paragraph 3: Certainly, in trying to explain the Roman phenomenon, one would have to place great emphasis on this almost instinct for the territorial imperative. Roman priorities lay in the organization, exploitation, and defense of their territory. In all probability it was the fertile plain of Latium, where the Latins who founded Rome originated, that created the habits and skills of landed settlement, landed property, landed economy, landed administration, and a land-based society. From this arose the Roman genius for military organization and orderly government. In turn, a deep attachment to the land, and to the stability which rural life engenders, fostered the Roman virtues: gravitas, a sense of responsibility, peitas, a sense of devotion to family and country, and iustitia, a sense of the natural order.

6. The word “fostered” in the passage is closest in meaning to

○accepted

○combined

○introduced

○encouraged

7. Paragraph 3 suggests which of the following about the people of Latium?

○Their economy was based on trade relations with other settlements.

○They held different values than the people of Rome.

○Agriculture played a significant role in the society.

○They possessed unusual knowledge of animal instincts

Paragraph 4 Modern attitudes to Roman civilization range from the infinitely impressed to the thorough disgusted. As always, there are the power worshippers, especially among historians, who are predisposed to admire whatever is strong, who feel more attracted to the might of Rome than to the subtlety of Greece. At the same time, there is a solid body of opinion that dislikes Rome. For many, Rome is at best the imitator and the continuator of Greece on a larger scale. Greek civilization had quality; Rome, mere quantity. Greece was the inventor; Rome, the research and development division. Such indeed was the opinion of some of the more intellectual Romans.” had the Greeks held novelty in such disdain as we,” asked Horace in his Epistle, “what work of ancient date would now exist?”

8. Paragraph 4 indicates that some historians admire Roman civilization because of

○the diversity of cultures within Roman society

○its strength

○its innovative nature

○the large body of literature that it developed

9. In paragraph 4, the author develops a description of Roman civilization by

○comparing the opinions of Roman intellectuals to Greek intellectuals

○identifying which characteristics of roman civilization were copied from Greece

○explaining how the differences between Roman and Greece developed as time passed

○contrasting characteristics of Roman civilization with characteristics of Greek civilization

10. According to paragraph 4, intellectual Romans such as Horace held which of the following opinions about their civilization?

○Ancient works of Greece held little value in the Roman world.

○The Greek civilization had been surpassed by the Romans.

○Roman civilization produced little that was original or memorable.

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○Romans valued certain types of innovations that had been ignored by ancient Greeks.

Paragraph 5: Rome's debt to Greece was enormous. The Romans adopted Greek religion and moral philosophy. In literature, Greek writers were consciously used as models by their Latin successors. It was absolutely accepted that an educated Roman should be fluent in Greek. In speculative philosophy and the sciences, the Romans made virtually no advance on early achievements.

Paragraph 6: Yet it would be wrong to suggest that Rome was somehow a junior partner in Greco-Roman civilization. The Roman genius was projected into new spheres—especially into those of law, military organization, administration, and engineering. Moreover, the tensions that arose within the Roman state produced literary and artistic sensibilities of the highest order. It was no accident that many leading Roman soldiers and statesmen were writers of high caliber.

11. The word "spheres" in the passage is closest in meaning to

○abilities

○areas

○combinations

○models

12. Which of the following statements about leading Roman soldiers and statesmen is supported by paragraphs 5 and 6?

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○They could read and write the Greek language.

○They frequently wrote poetry and plays.

○They focused their writing on military matters.

○They wrote according to the philosophical laws of the Greeks.

Paragraph 4 Modern attitudes to Roman civilization range from the infinitely impressed to the thorough disgusted. ■As always, there are the power worshippers, especially among historians, who are predisposed to admire whatever is strong, who feel more attracted to the might of Rome than to the subtlety of Greece. ■At the same time, there is a solid body of opinion that dislikes Rome. ■For many, Rome is at best the imitator and the continuator of Greece on a larger scale. ■Greek civilization had quality; Rome, mere quantity. Greece was the inventor; Rome, the research and development division. Such indeed was the opinion of some of the more intellectual Romans." had the Greeks held novelty in such disdain as we," asked Horace in his Epistle, "what work of ancient date would now exist?"

13. Look at the four squares ■ that indicate where the following sentence could be added to the passage.

They esteem symbols of Roman power, such as the massive Colosseum.

Where would the sentence best fit?

14. Direction: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. **This question worth 2.**

The Roman world drew its strength from several important sources

- ●
- ●
- ●

Answer choices

○Numerous controls imposed by Roman rulers held its territory together.

○The Roman military was organized differently from older military organizations.

○Romans valued sea power as did the Latins, the original inhabitants of Rome.

○Roman values were rooted in a strong attachment to the land and the stability of rural life.

○Rome combined aspects of ancient Greek civilization with its own contributions in new areas.

○Educated Romans modeled their own literature and philosophy on the ancient Greeks

参考答案：

1. ○ 3

2. ○ 3

3. ○ 2

4. ○ 1

5. ○ 1

6. ○ 4

7. ○ 3

8.○ 2

9. ○ 4

10.○ 3

11. ○ 2

12. ○ 1

13. ○ 2

14. ○ 1, 4, 5

参考译文

古代罗马和希腊

罗马具有一种希腊和其他任何不论是古代还是现在文明都不具备的凝聚力。罗马墙上的石块是靠设计的规整和特别有力的粘合剂而被固定在一起，与此相同罗马帝国的各个部分也因物理的、组织的和精神的束缚而组成了一个坚若磐石的整体。物理的束缚包括驻扎在每个省的戍卫军组成的网络和联通每个省与罗马的、用石头铺成的道路网络。组织上的羁绊则基于法律和行政的一般原则，以及遍布各地、统一行动的军政府。精神上的控制则建立在恐惧和惩罚上——毫无疑问的是任何人，或任何事，只要威胁到罗马的权威，都终将被摧毁。

罗马人对统一和团结的执着可能源自于罗马早期的发展模式。希腊是从二十几个分散的城邦发展而来，然而罗马则是从单个组织发展而来。希腊沿着地中海扩张，然而罗马帝国则通过领土的占领而壮大。当然，他们的对比也不是那么的绝对：在亚历山大大帝时期，希腊找到了他们整个历史中最大的领地征服者；罗马人虽曾一度迁移到意大利之外，但他们却没有荒废海洋的力量。然而，他们之间本质的区别是不容否认的。希腊世界的关键是强大的船队，而罗马帝国的关键则是他们行进的部队。希腊人死守着海洋，罗马人则死守着土地。希腊人是天生的水手，罗马人则是陆上强兵。

毫无疑问的是，为了解释罗马现象，人们应该极大的强调他们的几乎

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是本能的领土观念。罗马人的天性就在于对领土的组织、扩张和防御。完全也可能是 Latium 平原——拉丁人最初建立罗马的地方，早就了罗马人陆地定居、陆地财产、陆地经济、陆地行政以及以陆地基础社会的性格和技巧。在此基础上也产生了罗马人的军事组织和政府管理的才能，。反过来，对土地以及稳定乡村生活的深深的依恋孕育了罗马人的品格：gravitas，一种责任感；peitas，对家庭和国家的牺牲精神；以及 iustitia，一种对自然秩序的使命。

现在人们对罗马的态度各异，从无限的崇尚到彻底的反感。经常有权威的崇拜者，尤其是在历史学家中，不由自主的推崇强大，他们对罗马权力的欣赏远胜于对希腊狡黠的欣赏。与此同时，有一种固化的观念厌恶罗马。对于很多人而言，罗马至多不过是对希腊更大规模的模仿和延续，希腊文明拥有质量，罗马则仅仅拥有数量。希腊是发明者，而罗马则是研究和发展的分支。这些实际上是一些高智商罗马人的观点。“难道希腊人创造出新的事物后，我们就会被认为是如此的微不足道吗？”Horace 在他的信件中问道“古时候的什么工作现在还存在呢？”

罗马受希腊影响很大。罗马人吸收了希腊人的宗教和伦理哲学。在文学上，希腊作家被下意识的当作他们拉丁后裔的模范。毋庸置疑的是一个受过教育的罗马人一定会讲流利的希腊语。在推理哲学和科学上，罗马人实际上没有超过前期希腊的成就。

然而如果认为罗马是希腊-罗马文化的晚辈那就错了。罗马的天才们突破了新的领域—尤其是在法律、军队的组织、管理学和工程学上。而且，由罗马国家内部产生的压力促使文学和艺术的造诣达到最高水平。所以很多罗马的高级军官和政治家们都是高素质的作家。

Agriculture, Iron, and the Bantu Peoples

There is evidence of agriculture in Africa prior to 3000 B.C. It may have developed independently, but many scholars believe that the spread of agriculture and iron throughout Africa linked it to the major centers of the Near East and Mediterranean world. The drying up of what is now the Sahara desert had pushed many peoples to the south into sub-Sahara Africa. These peoples settled at first in scattered hunting-and-gathering bands, although in some places near lakes and rivers, people who fished, with a more secure food supply, lived in larger population concentrations. Agriculture seems to have reached these people from the Near East, since the first domesticated crops were millets and sorghums whose origins are not African but west Asian. Once the idea of planting diffused, Africans began to develop their own crops, such as certain varieties of rice, and they demonstrated a continued receptiveness to new imports. The proposed areas of the

domestication of African crops lie in a band that extends from Ethiopia across southern Sudan to West Africa. Subsequently, other crops, such as bananas, were introduced from Southeast Asia.

Livestock also came from outside Africa. Cattle were introduced from Asia, as probably were domestic sheep and goats. Horses were apparently introduced by the Hyksos invaders of Egypt (1780-1560 B.C.) and then spread across the Sudan to West Africa. Rock paintings in the Sahara indicate that horses and chariots were used to traverse the desert and that by 300-200 B.C., there were trade routes across the Sahara. Horses were adopted by peoples of the West African savannah, and later their powerful cavalry forces allowed them to carve out large empires. Finally, the camel was introduced around the first century A.D. This was an important innovation, because the camel's abilities to thrive in harsh desert conditions and to carry large loads cheaply made it an effective and efficient means of transportation. The camel transformed the desert from a barrier into a still difficult, but more accessible, route of trade and communication.

Iron came from West Asia, although its routes of diffusion were somewhat different than those of agriculture. Most of Africa presents a curious case in which societies moved directly from a technology of stone to iron without passing through the intermediate stage of copper or bronze metallurgy, although some early copper-working sites have been found in West Africa. Knowledge of iron making penetrated into the forest and savannahs of West Africa at roughly the

same time that iron making was reaching Europe. Evidence of iron making has been found in Nigeria, Ghana, and Mali.

This technological shift cause profound changes in the complexity of African societies. Iron represented power. In West Africa the blacksmith who made tools and functions. Iron hoes, which made the land more productive, and iron weapons, which made the warrior more powerful, had symbolic meaning in a number of West Africa societies. Those who knew the secrets of making iron gained ritual and sometimes political power.

Unlike in the Americas, where metallurgy was a very late and limited development, Africans had iron from a relatively early date, developing ingenious furnaces to produce the high heat needed for production and to control the amount of air that reached the carbon and iron ore necessary for making iron. Much of Africa moved right into the Iron Age, taking the basic technology and adapting it to local; conditions and resources.

The diffusion of agriculture and later of iron was accompanied by a great movement of people who may have carried these innovations. These people probably originated in eastern Nigeria. Their migration may have been set in motion by an increase in population caused by a movement of peoples fleeing the desiccation, or drying up, of the Sahara. They spoke a language, prior-Bantu ("Bantu" means "the people"), which is the parent tongue of a language of a large

number of Bantu languages still spoken throughout sub-Sahara Africa. Why and how these people spread out into central and southern Africa remains a mystery, but archaeologists believe that their iron weapons allowed them to conquer their hunting-gathering opponents, who still used stone implements. Still, the process is uncertain, and peaceful migration—or simply rapid demographic growth—may have also caused the Bantu explosion.

Paragraph 1: There is evidence of agriculture in Africa prior to 3000 B.C. It may have developed independently, but many scholars believe that the spread of agriculture and iron throughout Africa linked it to the major centers of the Near East and Mediterranean world. The drying up of what is now the Sahara desert had pushed many peoples to the south into sub-Sahara Africa. These peoples settled at first in scattered hunting-and-gathering bands, although in some places near lakes and rivers, people who fished, with a more secure food supply, lived in larger population concentrations. Agriculture seems to have reached these people from the Near East, since the first domesticated crops were millets and sorghums whose origins are not African but west Asian. Once the idea of planting diffused, Africans began to develop their own crops, such as certain varieties of rice, and they demonstrated a continued receptiveness to new imports. The proposed areas of the domestication of African crops lie in a band that extends from Ethiopia across southern Sudan to West Africa. Subsequently, other crops, such as bananas, were introduced from Southeast Asia.

1. The word “diffused” in the passage is closest in meaning to

○emerged

○was understood

○spread

○developed

2. According to paragraph 1, why do researchers doubt that agriculture developed independently in Africa?

○African lakes and rivers already provided enough food for people to survive without agriculture.

○The earliest examples of cultivated plants discovered in Africa are native to Asia.

○Africa’s native plants are very difficult to domesticate.

○African communities were not large enough to support agriculture.

3. In paragraph 1, what does the author imply about changes in the African environment during this time period?

○The climate was becoming milder, allowing for a greater variety of crops to be grown.

○Although periods of drying forced people south, they returned once their food supply was secure.

○Population growth along rivers and lakes was dramatically

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decreasing the availability of fish.

○A region that had once supported many people was becoming a desert where few could survive

Paragraph 2: Livestock also came from outside Africa. Cattle were introduced from Asia, as probably were domestic sheep and goats. Horses were apparently introduced by the Hyksos invaders of Egypt (1780-1560 B.C.) and then spread across the Sudan to West Africa. Rock paintings in the Sahara indicate that horses and chariots were used to traverse the desert and that by 300-200 B.C., there were trade routes across the Sahara. Horses were adopted by peoples of the West African savannah, and later their powerful cavalry forces allowed them to carve out large empires. Finally, the camel was introduced around the first century A.D. This was an important innovation, because the camel's abilities to thrive in harsh desert conditions and to carry large loads cheaply made it an effective and efficient means of transportation. The camel transformed the desert from a barrier into a still difficult, but more accessible, route of trade and communication.

4. According to paragraph 2,camels were important because they

○were the first domesticated animal to be introduced to Africa

○allowed the people of the West African savannahs to carve out large empires

○helped African peoples defend themselves against Egyptian invaders

○made it cheaper and easier to cross the Sahara

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5. According to paragraph 2, which of the following were subjects of rock paintings in the Sahara?

○Horses and chariots

○Sheep and goats

○Hyksos invaders from Egypt

○Camels and cattle

Paragraph 3: Iron came from West Asia, although its routes of diffusion were somewhat different than those of agriculture. Most of Africa presents a curious case in which societies moved directly from a technology of stone to iron without passing through the intermediate stage of copper or bronze metallurgy, although some early copper-working sites have been found in West Africa. Knowledge of iron making penetrated into the forest and savannahs of West Africa at roughly the same time that iron making was reaching Europe. Evidence of iron making has been found in Nigeria, Ghana, and Mali.

6. What function does paragraph 3 serve in the organization of the passage as a whole

○It contrasts the development of iron technology in West Asia and West Africa.

○It discusses a non-agricultural contribution to Africa from Asia.

○It introduces evidence that a knowledge of copper working reached

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Africa and Europe at the same time.

○It compares the rates at which iron technology developed in different parts of Africa.

Paragraph 4: This technological shift cause profound changes in the complexity of African societies. Iron represented power. In West Africa the blacksmith who made tools and functions. Iron hoes, which made the land more productive, and iron weapons, which made the warrior more powerful, had symbolic meaning in a number of West Africa societies. Those who knew the secrets of making iron gained ritual and sometimes political power.

7. The word “profound” in the passage is closest in meaning to

○fascinating

○far-reaching

○necessary

○temporary

8. The word “ritual” in the passage is closest in meaning to

○military

○physical

○ceremonial

○permanent

9. According to paragraph 4, all of the following were social effects of the new metal technology in Africa EXCEPT:

○Access to metal tools and weapons created greater social equality.

○Metal weapons increased the power of warriors.

○Iron tools helped increase the food supply.

○Technical knowledge gave religious power to its holders.

Paragraph 5: Unlike in the Americas, where metallurgy was a very late and limited development, Africans had iron from a relatively early date, developing ingenious furnaces to produce the high heat needed for production and to control the amount of air that reached the carbon and iron ore necessary for making iron. Much of Africa moved right into the Iron Age, taking the basic technology and adapting it to local; conditions and resources.

10. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○While American iron makers developed the latest furnaces, African iron makers continued using earlier techniques.

○Africans produced iron much earlier than Americans, inventing technologically sophisticated heating systems.

○Iron making developed earlier in Africa than in the Americas because of the ready availability of carbon and iron ore.

○Both Africa and the Americas developed the capacity for making iron early, but African metallurgy developed at a slower rate.

Paragraph 6: The diffusion of agriculture and later of iron was accompanied by a great movement of people who may have carried these innovations. These people probably originated in eastern Nigeria. Their migration may have been set in motion by an increase in population caused b a movement of peoples fleeing the desiccation, or drying up, of the Sahara. They spoke a language, prior-Bantu ("Bantu" means "the people"), which is the parent tongue of a language of a large number of Bantu languages still spoken throughout sub-Sahara Africa. Why and how these people spread out into central and southern Africa remains a mystery, but archaeologists believe that their iron weapons allowed them to conquer their hunting-gathering opponents, who still used stone implements. Still, the process is uncertain, and peaceful migration—or simply rapid demographic growth—may have also caused the Bantu explosion.

11. The word "fleeing" in the passage is closest in meaning to

○afraid of

○displaced by

○running away from

○responding to

12. Paragraph 6 mentions all of the following as possible causes of the

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"Bantu explosion" EXCEPT

○superior weapons

○better hunting skills

○peaceful migration

○increased population

Paragraph 6: The diffusion of agriculture and later of iron was accompanied by a great movement of people who may have carried these innovations. These people probably originated in eastern Nigeria. ■Their migration may have been set in motion by an increase in population caused by a movement of peoples fleeing the desiccation, or drying up, of the Sahara. ■They spoke a language, prior-Bantu ("Bantu" means "the people"), which is the parent tongue of a language of a large number of Bantu languages still spoken throughout sub-Sahara Africa. Why and how these people spread out into central and southern Africa remains a mystery, but archaeologists believe that their iron weapons allowed them to conquer their hunting-gathering opponents, who still used stone implements. ■Still, the process is uncertain, and peaceful migration—or simply rapid demographic growth—may have also caused the Bantu explosion. ■

13. Look at the four squares ■ that indicate where the following sentence could be added to the passage.

These people had a significant linguistic impact on the continent as well.

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Where would the sentence best fit?

14. Direction: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. **This question is worth 2 points.**

Agriculture and iron working probably spread to Africa from neighboring regions.

●

●

●

Answer choices

○Once Africans developed their own crops, they no longer borrowed from other regions.

○The harshness of the African climate meant that agriculture could not develop until after the introduction of iron tools.

○The use of livestock improved transportation and trade and allowed for new forms of political control.

○As the Sahara expanded, the camel gained in importance, eventually coming to have religious significance.

○The spread of iron working had far-reaching effects on social, economic, and

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political organization in Africa.

○Today's Bantu-speaking peoples are descended from a technologically advanced people who spread throughout Africa.

参考答案：

1. ○3

2. ○2

3. ○4

4. ○4

5. ○1

6. ○2

7. ○2

8.○3

9. ○1

10. ○2

11. ○3

12. ○2

13. ○2

14. ○3 , 5, 6

参考译文

农业、铁器和班图人

在非洲，早在公元前 3000 年以前就有了农业的迹象。它可能是独立发展的，但很多学者认为农业和铁器在非洲的传播将费中与近东的中心和地中海世界联系了起来。就是现在的撒哈拉沙漠地区的不断变得干旱使得很多人向南迁徙到撒哈拉沙漠以南的非洲地区。这些部落起初分散的定居，并仍靠打猎和采集维生,尽管是在靠近湖泊和河流的地区人们以捕鱼为业，有较稳定的食物供给，聚集了较多的人口。农业技术可能来自于近东最终为非洲人所知，因为最初驯化的农作物是起源于西亚而不是非洲的小米和高粱。一旦种植的思想传播开来，非洲人就开始培育他们自己的农作物，比如某些水稻，并且他们一直愿意接受新的外来作物。人们认为驯化非洲作物的地区从埃塞俄比亚一直延伸到苏丹的南部，再到西非。接下来，其他的作物，比如香蕉，就从南亚传入到非洲了。

家禽也来自于非洲以外的地区。牛是从亚洲引入的，家养绵羊和山羊也可能是这样的。马匹显然是由欧洲的 Hyksos 入侵者（1780-1560B.C.）引入的之后就从苏丹传到西非。撒哈拉石画表明马匹和马车曾被用于穿越沙漠，并且，在公元前 300 到到 200 年间，有商队横穿沙哈拉沙漠的路线。西非大草原上的人们使用马匹，后来他们强大的骑兵力量使他们缔造了庞大的帝国。最后，骆驼大约在公元一世纪被引入到非洲。这是一次重要革新，因为骆驼有能力生存在恶劣的沙漠环境，另外，骆驼可以便宜的运输大量的载荷，这使得它们成为了一种方便高效的运输方式。骆驼使得沙漠

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从障碍转换为一条虽依然艰难但已经更加容易接近的商路和交流通道。

铁器来自于西亚，虽然它传播的路径跟农业技术的不同。大部分非洲表现出一种奇怪的现象，那就是他们社会直接从石器时代进步到铁器时代，而没有经过中间过渡的铜器或青铜器冶金术，尽管在西亚发现了一些早期使用铜器的地区。冶铁技术在差不多到达欧洲的同时，就穿过了森林和大草原到达非洲。在尼日尼亚，加纳和马里发现了制作铁器的证据。

科技的革新对非洲社会的复杂性产生了深刻的改变。铁器代表着力量。在西非的很多社会里，生产工具的铁匠、使土地更多产的铁锄、使战士更强大的铁制武器都有着象征意义。这些对西非社会有着标志性的意义。那些掌握了制铁技术的人们常可获得宗教权力，有时候获得政治权力。

美洲的冶铁技术发展的非常晚，并且有限，而非洲则完全不同，他们的冶铁技术从相对较早的时期就开始发展；他们制造了精巧的高炉以产生冶铁所需要的高温，并能控制与碳和铁矿石接触的空气用量以满足冶铁的需要。大部分非洲人直接进入了铁器时代，他们吸取了冶铁的基本技术并使之与当地的条件和资源相适应。

农业和后来冶铁技术是伴随着那些已经掌握了新技术的人们的大迁徙而传播的。这些人可能来源于尼日尼亚东部。为了逃避撒哈拉沙漠的不断干旱，人们迁徙到尼日尼亚东部，使这里的人口增多，于是这里的人们也接着迁徙。他们所说是前班图语，也就是现在仍然为广泛的撒哈拉沙漠南部

非洲人所使用的班图语的源头。这些人为什么扩散到非洲中部和南部？他们怎么迁徙的？仍然是迷。不过考古学家们相信他们的铁制武器足以让他们战胜那些靠采集打猎为生的敌人，因为这些人仍然利用石质工具。不过过程仍然无人知道，另外，和平的移民或者简单的人口增长，都可能导致班图的扩张。

THE RISE OF TEOTIHUACAN

The city of Teotihuacán, which lay about 50 kilometers northeast of modern-day Mexico City, began its growth by 200-100 B.C. At its height, between about A.D. 150 and 700, it probably had a population of more than 125,000 people and covered at least 20 square kilometers. It had over 2,000 apartment complexes, a great market, a large number of industrial workshops, an administrative center, a number of massive religious edifices, and a regular grid pattern of streets and buildings. Clearly, much planning and central control were involved in the expansion and ordering of this great metropolis. Moreover, the city had economic and perhaps religious contacts with most parts of Mesoamerica (modern Central America and Mexico).

How did this tremendous development take place, and why did it happen in the Teotihuacán Valley? Among the main factors are Teotihuacán's geographic location on a natural trade route to the south and east of the Valley of Mexico, the obsidian resources in the Teotihuacán Valley itself, and the valley's potential for extensive irrigation. The exact role of other factors is much more difficult to pinpoint—for instance, Teotihuacán's religious significance as a shrine, the historical situation in and around the Valley of Mexico toward the end of the first millennium B.C., the ingenuity and foresightedness of Teotihuacán's elite, and, finally, the impact of natural disasters, such as the volcanic eruptions of the late first millennium B.C.

This last factor is at least circumstantially implicated in Teotihuacán's rise. Prior to 200 B.C., a number of relatively small centers coexisted in and near the Valley of Mexico. Around this time, the largest of these centers, Cuicuilco, was seriously affected by a volcanic eruption, with much of its agricultural land covered by lava. With Cuicuilco eliminated as a potential rival, any one of a number of relatively modest towns might have emerged as a leading economic and political power in Central Mexico. The archaeological evidence clearly indicates, though, that Teotiluacan was the center that did arise as the predominant force in the area by the first century A.D.

It seems likely that Teotihuacán's natural resources, along with the city elite's ability to recognize their potential, gave the city a competitive edge over its neighbors. The valley, like many other places in Mexican and Guatemalan highlands, was rich in obsidian. The hard volcanic stone was a resource that had been in great demand for many years, at least since the rise of the Olmecs (a people who flourished between 1200 and 400 B.C.), and it apparently had a secure market. Moreover, recent research on obsidian tools found at Olmecs sites has shown that some of the obsidian obtained by the Olmecs originated near Teotihuacán. Teotihuacán obsidian must have been recognized as a valuable commodity for many centuries before the great city arose.

Long-distance trade in obsidian probably gave the elite residents of

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Teotihuacán access to a wide variety of exotic good, as well as a relatively prosperous life. Such success may have attracted immigrants to Teotihuacán. In addition, Teotihuacán's elite may have consciously attempted to attract new inhabitants. It is also probable that as early as 200 B.C. Teotihuacán may have achieved some religious significance and its shrine (or shrines) may have served as an additional population magnet. Finally, the growing population was probably fed by increasing the number and size of irrigated fields.

The picture of Teotihuacán that emerges is a classic picture of positive feedback among obsidian mining and working, trade, population growth, irrigation, and religious tourism. The thriving obsidian operation, for example, would necessitate more miners, additional manufacturers of obsidian tools, and additional traders to carry the goods to new markets. All this led to increased wealth, which in turn would attract more immigrants to Teotihuacán. The growing power of the elite, who controlled the economy, would give them the means to physically coerce people to move to Teotihuacán and serve as additions to the labor force. More irrigation works would have to be built to feed the growing population, and this resulted in more power and wealth for the elite.

Paragraph 1: The city of Teotihuacán, which lay about 50 kilometers northeast of modern-Day Mexico City, began its growth by 200-100 B.C. At its height, between about A.D. 150 and 700, it probably had a population of more than

125,000 people and covered at least 20 square kilometers. It had over 2,000 apartment complexes, a great market, a large number of industrial workshops, an administrative center, a number of massive religious edifices, and a regular grid pattern of streets and buildings. Clearly, much planning and central control were involved in the expansion and ordering of his great metropolis. Moreover, the city had economic and perhaps religious contacts with most parts of Mesoamerica (modern Central America and Mexico).

1. The word massive in the passage is closest in meaning to

○ancient

○carefully

○very large

○carefully protected

2. In paragraph 1, each of the following is mentioned as a feature of the city of Teotihuacán between A.D. 150 and 700 EXCEPT

○regularly arranged streets

○several administrative centers spread across the city

○many manufacturing workshops

○apartment complexes

Paragraph 2: How did this tremendous development take place, and why did it happen in the Teotihuacán Valley? Among the main factors are Teotihuacán's

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geographic location on a natural trade route to the south and east of the Valley of Mexico, the obsidian resources in the Teotihuacán Valley itself, and the valley's potential for extensive irrigation. The exact role of other factors is much more difficult to pinpoint, for instance, Teotihuacán's religious significance as a shrine, the historical situation in and around the Valley of Mexico toward the end of the first millennium B.C., the ingenuity and foresightedness of Teotihuacán's elite, and, finally, the impact of natural disasters, such as the volcanic eruptions of the late first millennium B.C.

3. The word pinpoint in the passage is closest in meaning to

- ○identify precisely
- ○make an argument for
- ○describe
- ○understand

4. The word ingenuity in the passage is closest in meaning to

- ○ambition
- ○sincerity
- ○faith
- ○cleverness

5. Which of the following is NOT mentioned in paragraph 2 as a main factor in the development of Teotihuacán?

- The presence of obsidian in the Teotihuacán Valley
- The potential for extensive irrigation of Teotihuacán Valley lands
- A long period of volcanic inactivity in the Teotihuacán Valley
- Teotihuacán's location on a natural trade route

Paragraph 2: How did this tremendous development take place, and why did it happen in the Teotihuacán Valley? Among the main factors are Teotihuacán's geographic location on a natural trade route to the south and east of the Valley of Mexico, the obsidian resources in the Teotihuacán Valley itself, and the valley's potential for extensive irrigation. The exact role of other factors is much more difficult to pinpoint, for instance, Teotihuacán's religious significance as a shrine, the historical situation in and around the Valley of Mexico toward the end of the first millennium B.C., the ingenuity and foresightedness of Teotihuacán's elite, and, finally, the impact of natural disasters, such as the volcanic eruptions of the late first millennium B.C.

Paragraph 3: This last factor is at least circumstantially implicated in Teotihuacán's rise. Prior to 200 B.C., a number of relatively small centers coexisted in and near the Valley of Mexico. Around this time, the largest of these centers, Cuicuilco, was seriously affected by a volcanic eruption, with much of its agricultural land covered by lava. With Cuicuilco eliminated as a potential rival, any one of a number of relatively modest towns might have emerged as a leading economic and political power in Central Mexico. The archaeological evidence clearly indicates, though, that Teotiluacan was the center that did arise as

the predominant force in the area by the first century A.D.

6. Which of the following can be inferred from paragraphs 2 and 3 about the Volcanic eruptions of the late first millennium B.C.?

○They were more frequent than historians once thought.

○They may have done more damage to Teotihuacán than to neighboring centers.

○They may have played a major role in the rise of Teotihuacán.

○They increased the need for extensive irrigation in the Teotihuacán Valley

7. What can be inferred from paragraph 3 about Cuicuilco prior to 200 B.C.?

○It was a fairly small city until that date.

○It was located outside the Valley of Mexico.

○It emerged rapidly as an economical and political center.

○Its economy relied heavily on agriculture.

8. The word predominant in the passage is closest in meaning to

○most aggressive

○most productive

○principal

○earliest

Paragraph 4: It seems likely that Teotihuacán's natural resources, along with

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the city elite's ability to recognize their potential, gave the city a competitive edge over its neighbors, The valley, like many other places in Mexican and Guatemalan highlands, was rich in obsidian. The hard volcanic stone was a resource that had been in great demand for many years, at least since the rise of the Olmecs (a people who flourished between 1200 and 400 B.C.), and it apparently had a secure market. Moreover, recent research on obsidian tools found at Olmecs sites has shown that some of the obsidian obtained by the Olmecs originated near Teotihuacán. Teotihuacán obsidian must have been recognized as a valuable commodity for many centuries before the great city arose.

9. Which of the following allowed Teotihuacán to have "a competitive edge over its neighbors"?

○A well-exploited and readily available commodity

○The presence of a highly stable elite class

○Knowledge derived directly from the Olmecs about the art of tool making

○Scarce natural resources in nearby areas such as those located in what are now the Guatemalan and Mexican highlands

10. According to paragraph 4, what has recent research on obsidian tools found at Olmec sites shown?

○Obsidian's value was understood only when Teotihuacán became an important city.

○The residents of Teotihuacán were sophisticated toolmakers.

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○The residents of Teotihuacán traded obsidian with the Olmecs as early as 400 B.C.

○Some of the obsidian used by the Olmecs came from the area around Teotihuacán.

Paragraph 5: Long-distance trade in obsidian probably gave the elite residents of Teotihuacán access to a wide variety of exotic good, as well as a relatively prosperous life. Such success may have attracted immigrants to Teotihuacán. In addition, Teotihuacán's elite may have consciously attempted to attract new inhabitants. It is also probable that as early as 200 B.C. Teotihuacán may have achieved some religious significance and its shrine (or shrines) may have served as an additional population magnet. Finally, the growing population was probably fed by increasing the number and size of irrigated fields.

11. Select the TWO answer choices that are mentioned in paragraph 5 as being features of Teotihuacán that may have attracted immigrants to the city. To receive credit, you must select TWO answers.

○The prosperity of the elite

○Plenty of available housing

○Opportunities for well-paid agricultural employment

○The presence of one or more religious shrines

Paragraph 6: The picture of Teotihuacán that emerges is a classic picture of

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positive feedback among obsidian mining and working, trade, population growth, irrigation, and religious tourism. The thriving obsidian operation, for example, would necessitate more miners, additional manufacturers of obsidian tools, and additional traders to carry the goods to new markets. All this led to increased wealth, which in turn would attract more immigrants to Teotihuacán. The growing power of the elite, who controlled the economy, would give them the means to physically coerce people to move to Teotihuacán and serve as additions to the labor force. More irrigation works would have to be built to feed the growing population, and this resulted in more power and wealth for the elite.

12. In paragraph 6, the author discusses the "The thriving obsidian operation" in order to

○explain why manufacturing was the main industry of Teotihuacán

○give an example of an industry that took very little time to develop in Teotihuacán

○Illustrate how several factors influenced each other to make Teotihuacán a powerful and wealthy city

○explain how a successful industry can be a source of wealth and a source of conflict at the same time

Paragraph 1: The city of Teotihuacán, which lay about 50 kilometers northeast of modern-Day Mexico City, began its growth by 200-100 B.C. At its height, between about A.D. 150 and 700, it probably had a population of more than

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125,000 people and covered at least 20 square kilometers. ■It had over 2,000 apartment complexes, a great market, a large number of industrial workshops, an administrative center, a number of massive religious edifices, and a regular grid pattern of streets and buildings. ■Clearly, much planning and central control were involved in the expansion and ordering of this great metropolis. ■ Moreover, the city had economic and perhaps religious contacts with most parts of Mesoamerica (modern Central America and Mexico). ■

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

In fact, artifacts and pottery from Teotihuacán have been discovered in sites as far away as the Mayan lowlands, the Guatemalan highlands, northern Mexico, and the Gulf Coast of Mexico.

Where would the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

Teotihuacán was a highly developed city in Mesoamerica that reached its peak between about A.D. 150 and 700.

●

●

●

Answer choices

○The number and sophistication of the architectural, administrative, commercial, and religious features of Teotihuacan indicate the existence of centralized planning and control.

○Teotihuacán may have developed its own specific local religion as a result of the cultural advances made possible by the city's great prosperity.

○As a result of its large number of religious shrines, by the first century A.D., Teotihuacan become the most influential.

○Several factors may account for Teotihuacán's extraordinary development, including its location, rich natural resources, irrigation potential, intelligent elite, and the misfortune of rival communities.

○In many important areas, from the obsidian industry to religious tourism, Teotihuacán's success and prosperity typified the classic positive feedback cycle.

○Although many immigrants settled in Teotihuacán between A.D.150 and 700, the increasing threat of coerced labor discouraged further settlement and limited Teotihuacán's population growth.

参考答案：

1. ○3

2. ○2

3. ○1

4. ○4

5. ○3

6. ○3

7. ○4

8.○3

9. ○1

10. ○4

11. ○1, 4

12. ○3

13. ○4

14. ○1, 4, 5

参考译文

特奥蒂瓦坎的崛起

起源于公元前 200 到 100 年前的特奥蒂瓦坎城位于现在的墨西哥城东北约 50 公里处。在鼎盛时期，也就是大约在公元 150 到 700 年间，它可能有超过 12.5 万的人口至少覆盖圆 20 平方公里。它拥有超过 2,000 座大厦、一座大型市场、大量的工业作坊、一个行政管理中心、数量庞大的宗教场所还有规则的街道建筑网络。显然，这座伟大的都市的管理和扩张时经过了精心的规划和集中管理的。甚至特奥蒂瓦坎城与中美洲的大部分都保持着经济和宗教的联系。

这惊人的发展是如何完成的呢，另外它为什么会发生在奥特蒂瓦坎峡谷呢？其中最主要的原因就是奥特蒂瓦坎地处联通墨西哥峡谷南部和东部的自然形成的通商线路中，奥特蒂瓦坎峡谷本身拥有的黑曜石资源，还有奥特蒂瓦坎峡谷大面积灌溉的潜能。而其他的因素的作用则很难表述清楚——例如，奥特蒂瓦坎作为宗教圣地的重要地位，在公元前一千年后期墨西哥峡谷及其周围地区的历史情况，奥特蒂瓦坎精英们的机智和深谋远虑，以及自然灾害的冲击，比如在公元前一千年后期的火山喷发。

这最后的因素至少偶然的暗示了奥特蒂瓦坎的崛起。在公元前 200 年以前，有很多相对较小的中心在墨西哥峡谷内部和周围和谐共存着。就在这时其中最大的中心，Cuicuilco 遭到火山爆发的严重影响，其大部分农田被岩浆覆盖了。随着 Cuicuilco 失去了竞争能力，其他任何一个中等的

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城镇都可能成为墨西哥中部新一代政治经济中心。考古资料明确的表明，特奥蒂瓦坎就是在公元一世纪时崛起的中心。

很可能是特奥蒂瓦坎的自然资源，和精英们重组它们的才能，给予这座城市以与其邻居们抗衡的力量。像墨西哥和危地马拉高地的其他地区一样，这个峡谷也富含黑曜岩。那坚硬的火成岩在很多年内都是需求量极大的资源,至少从奥尔达克人(一个在公元前 1200 到 400 年间繁荣过的名族)的崛起之后就是这样了，显然它有着一个稳定的市场。关于最近在奥尔达克遗址中发掘的黑曜岩工具的研究表明，奥尔达克所得到的部分黑曜石工具源自特奥蒂瓦坎地区。在这座伟大的城市崛起之前，特奥蒂瓦坎的黑曜岩工具一定已经作为极有价值的商品闻名数世纪了。

长距离的黑曜岩交易可能就使得特奥蒂瓦坎的精英们有机会得到外来的商品和繁荣的生活，这种成功可能会吸引移民到特奥蒂瓦坎。另外，特奥蒂瓦坎的贵族们也可能会有意的吸引新的移民。也有可能是早在公元前 200 年前，特奥蒂瓦坎的宗教就达到了一定的高度，所以其神殿就是另一种对移民的吸引力。最后，不断增加的人口可以通过扩大灌溉土地的面积和规模而得到给养。

那展现出来的特奥蒂瓦坎的生活图景是一种经典的在黑曜岩矿产和交易，人口的增长，灌溉的扩张，还有宗教旅游业之间的良性反馈。比如说，黑曜岩交易的发展将需要更多的矿工，更多的黑曜岩工具的制造商和更多的商人将工具运往新的市场。所有的这一切导致了财富的增加，而财富的

增加反过来又会吸引更多的人移民到特奥蒂瓦坎。而那些掌控者经济命脉的社会精英们的力量的增长就会为他们提供了种种方法以迫使人们移往特奥蒂瓦坎以充当额外的劳动力。于是就不得不建成更多的灌溉工事以给养增长的人口，而这又会导致精英们力量和财富的增加。

EXTINCTION OF THE DINOSAURS

Paleontologists have argued for a long time that the demise of the dinosaurs was caused by climatic alterations associated with slow changes in the positions of continents and seas resulting from plate tectonics. Off and on throughout the Cretaceous (the last period of the Mesozoic era, during which dinosaurs flourished), large shallow seas covered extensive areas of the continents. Data from diverse sources, including geochemical evidence preserved in seafloor sediments, indicate that the Late Cretaceous climate was milder than today's. The days were not too hot, nor the nights too cold. The summers were not too warm, nor the winters too frigid. The shallow seas on the continents probably buffered the temperature of the nearby air, keeping it relatively constant.

At the end of the Cretaceous, the geological record shows that these seaways retreated from the continents back into the major ocean basins. No one knows why. Over a period of about 100,000 years, while the seas pulled back, climates around the world became dramatically more extreme: warmer days, cooler nights; hotter summers, colder winters. Perhaps dinosaurs could not tolerate these extreme temperature changes and became extinct.

If true, though, why did cold-blooded animals such as snakes, lizards, turtles, and crocodiles survive the freezing winters and torrid summers? These animals are at the mercy of the climate to maintain a livable body temperature. It's hard to

understand why they would not be affected, whereas dinosaurs were left too crippled to cope, especially if, as some scientists believe, dinosaurs were warm-blooded. Critics also point out that the shallow seaways had retreated from and advanced on the continents numerous times during the Mesozoic, so why did the dinosaurs survive the climatic changes associated with the earlier fluctuations but not with this one? Although initially appealing, the hypothesis of a simple climatic change related to sea levels is insufficient to explain all the data.

Dissatisfaction with conventional explanations for dinosaur extinctions led to a surprising observation that, in turn, has suggested a new hypothesis. Many plants and animals disappear abruptly from the fossil record as one moves from layers of rock documenting the end of the Cretaceous up into rocks representing the beginning of the Cenozoic (the era after the Mesozoic). Between the last layer of Cretaceous rock and the first layer of Cenozoic rock, there is often a thin layer of clay. Scientists felt that they could get an idea of how long the extinctions took by determining how long it took to deposit this one centimeter of clay and they thought they could determine the time it took to deposit the clay by determining the amount of the element iridium (lr) it contained.

It has not been common at Earth's since the very beginning of the planet's history. Because it usually exists in a metallic state, it was preferentially incorporated in Earth's core as the planet cooled and consolidated. lr is found in high concentrations in some meteorites, in which the solar system's original

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chemical composition is preserved. Even today, microscopic meteorites continually bombard Earth, falling on both land and sea. By measuring how many of these meteorites fall to Earth over a given period of time, scientists can estimate how long it might have taken to deposit the observed amount of lr in the boundary clay. These calculations suggest that a period of about one million years would have been required. However, other reliable evidence suggests that the deposition of the boundary clay could not have taken one million years. So the unusually high concentration of lr seems to require a special explanation.

In view of these facts, scientists hypothesized that a single large asteroid, about 10 to 15 kilometers across, collided with Earth, and the resulting fallout created the boundary clay. Their calculations show that the impact kicked up a dust cloud that cut off sunlight for several months, inhibiting photosynthesis in plants; decreased surface temperatures on continents to below freezing; caused extreme episodes of acid rain; and significantly raised long-term global temperatures through the greenhouse effect. This disruption of food chain and climate would have eradicated the dinosaurs and other organisms in less than fifty years.

Paragraph 1: Paleontologists have argued for a long time that the demise of the dinosaurs was caused by climatic alterations associated with slow changes in the positions of continents and seas resulting from plate tectonics. Off and on

throughout the Cretaceous (the last period of the Mesozoic era, during which dinosaurs flourished), large shallow seas covered extensive areas of the continents. Data from diverse sources, including geochemical evidence preserved in seafloor sediments, indicate that the Late Cretaceous climate was milder than today's. The days were not too hot, nor the nights too cold. The summers were not too warm, nor the winters too frigid. The shallow seas on the continents probably buffered the temperature of the nearby air, keeping it relatively constant.

1. According to paragraph 1, which of the following is true of the Late Cretaceous climate?

○Summers were very warm and winters were very cold.

○Shallow seas on the continents caused frequent temperature changes.

○The climate was very similar to today's climate.

○The climate did not change dramatically from season to season.

Paragraph 2: At the end of the Cretaceous, the geological record shows that these seaways retreated from the continents back into the major ocean basins. No one knows why. Over a period of about 100,000 years, while the seas pulled back, climates around the world became dramatically more extreme: warmer days, cooler nights; hotter summers, colder winters. Perhaps dinosaurs could not tolerate these extreme temperature changes and became extinct.

2. Which of the following reasons is suggested in paragraph 2 for the

extinction of the dinosaurs?

○Changes in the lengths of the days and nights during the late Cretaceous period

○Droughts caused by the movement of seaways back into the oceans

○The change from mild to severe climates during the Late Cretaceous period

○An extreme decrease in the average yearly temperature over 10, ooo years

Paragraph 3: If true, though, why did cold-blooded animals such as snakes, lizards, turtles, and crocodiles survive the freezing winters and torrid summers? These animals are at the mercy of the climate to maintain a livable body temperature. It's hard to understand why they would not be affected, whereas dinosaurs were left too crippled to cope, especially if, as some scientists believe, dinosaurs were warm-blooded. Critics also point out that the shallow seaways had retreated from and advanced on the continents numerous times during the Mesozoic, so why did the dinosaurs survive the climatic changes associated with the earlier fluctuations but not with this one? Although initially appealing, the hypothesis of a simple climatic change related to sea levels is insufficient to explain all the data.

3. Why does the author mention the survival of "snakes, lizards, turtles, and crocodiles" in paragraph 3?

○To argue that dinosaurs may have become extinct because they were not

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cold-blooded animals

○To question the adequacy of the hypothesis that climatic change related to sea levels caused the extinction of the dinosaurs

○To present examples of animals that could maintain a livable body temperature more easily than dinosaurs

○To support a hypothesis that these animals were not as sensitive to climate changes in the Cretaceous period as they are today

4. The word cope in the passage is closest in meaning to

○adapt

○move

○continue

○compete

5. According to paragraph 3, which of the following is true of changes in climate before the Cretaceous period and the effect of these changes on dinosaurs?

○Climate changes associated with the movement of seaways before the Cretaceous period did not cause dinosaurs to become extinct.

○Changes in climate before the Cretaceous period caused severe fluctuations in sea level, resulting in the extinction of the dinosaurs.

○Frequent changes in climate before the Cretaceous period made dinosaurs better able to maintain a livable body temperature.

○Before the Cretaceous period there were few changes in climate, and

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dinosaurs flourished.

6. The word fluctuations in the passage is closest in meaning to

○extremes

○retreats

○periods

○variations

Paragraph 4: Dissatisfaction with conventional explanations for dinosaur extinctions led to a surprising observation that, in turn, has suggested a new hypothesis. Many plants and animals disappear abruptly from the fossil record as one moves from layers of rock documenting the end of the Cretaceous up into rocks representing the beginning of the Cenozoic (the era after the Mesozoic). Between the last layer of Cretaceous rock and the first layer of Cenozoic rock, there is often a thin layer of clay. Scientists felt that they could get an idea of how long the extinctions took by determining how long it took to deposit this one centimeter of clay and they thought they could determine the time it took to deposit the clay by determining the amount of the element iridium (lr) it contained.

7. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? In correct choices change the meaning in important ways or leave out essential information.

○The fossil record suggests that there was an abrupt extinction of many

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plants and animals at the end of the Mesozoic era.

○Few fossils of the Mesozoic era have survived in the rocks that mark the end of the Cretaceous.

○Fossils from the Cretaceous period of the Mesozoic up to the beginning of the Cenozoic era have been removed from the layers of rock that surrounded them.

○Plants and animals from the Mesozoic era were unable to survive in the Cenozoic era.

Paragraph 4: Dissatisfaction with conventional explanations for dinosaur extinctions led to a surprising observation that, in turn, has suggested a new hypothesis. Many plants and animals disappear abruptly from the fossil record as one moves from layers of rock documenting the end of the Cretaceous up into rocks representing the beginning of the Cenozoic (the era after the Mesozoic). Between the last layer of Cretaceous rock and the first layer of Cenozoic rock, there is often a thin layer of clay. Scientists felt that they could get an idea of how long the extinctions took by determining how long it took to deposit this one centimeter of clay and they thought they could determine the time it took to deposit the clay by determining the amount of the element iridium (lr) it contained.

8. In paragraph 4, all the following questions are answered EXCEPT:

○Why is there a layer of clay between the rocks of the Cretaceous and Cenozoic?

○Why were scientists interested in determining how long it took to deposit

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the layer of clay at the end of the Cretaceous?

○What was the effect of the surprising observation scientists made?

○Why did scientists want more information about the dinosaur extinctions at the end of the Cretaceous?

Paragraph 5: lt has not been common at Earth's since the very beginning of the planet's history. Because it usually exists in a metallic state, it was preferentially incorporated in Earth's core as the planet cooled and consolidated. lr is found in high concentrations in some meteorites, in which the solar system's original chemical composition is preserved. Even today, microscopic meteorites continually bombard Earth, falling on both land and sea. By measuring how many of these meteorites fall to Earth over a given period of time, scientists can estimate how long it might have taken to deposit the observed amount of lr in the boundary clay. These calculations suggest that a period of about one million years would have been required. However, other reliable evidence suggests that the deposition of the boundary clay could not have taken one million years. So the unusually high concentration of lr seems to require a special explanation.

9. The word bombard in the passage is closest in meaning to

○approach

○strike

○pass

○circle

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10. Paragraph 5 implies that a special explanation of lr in the boundary clay is needed because

○the lr in microscopic meteorites reaching Earth during the Cretaceous period would have been incorporated into Earth's core

○the lr in the boundary clay was deposited much more than a million years ago

○the concentration of lr in the boundary clay is higher than in microscopic meteorites

○the amount of lr in the boundary clay is too great to have come from microscopic meteorites during the time the boundary clay was deposited

Paragraph 6: In view of these facts, scientists hypothesized that a single large asteroid, about 10 to 15 kilometers across, collided with Earth, and the resulting fallout created the boundary clay. Their calculations show that the impact kicked up a dust cloud that cut off sunlight for several months, inhibiting photosynthesis in plants; decreased surface temperatures on continents to below freezing; caused extreme episodes of acid rain; and significantly raised long-term global temperatures through the greenhouse effect. This disruption of food chain and climate would have eradicated the dinosaurs and other organisms in less than fifty years.

11. The word disruption in the passage is closest in meaning to

○exhaustion

○disturbance

○modification

○disappearance

12. Paragraph 6 mentions all of the following effects of the hypothesized asteroid collision EXCEPT

○a large dust cloud that blocked sunlight

○an immediate drop in the surface temperatures of the continents

○an extreme decrease in rainfall on the continents

○a long-term increase in global temperatures

Paragraph 5: It has not been common at Earth's since the very beginning of the planet's history. Because it usually exists in a metallic state, it was preferentially incorporated in Earth's core as the planet cooled and consolidated. Lr is found in high concentrations in some meteorites, in which the solar system's original chemical composition is preserved. Even today, microscopic meteorites continually bombard Earth, falling on both land and sea. By measuring how many of these meteorites fall to Earth over a given period of time, scientists can estimate how long it might have taken to deposit the observed amount of lr in the boundary clay. ■These calculations suggest that a period of about one million years would have been required. ■However, other reliable evidence suggests that the deposition of the boundary clay could not have taken one million years. ■So the

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unusually high concentration of lr seems to require a special explanation. ■

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

Consequently, the idea that the lr in the boundary clay came from microscopic meteorites cannot be accepted.

Where would the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express that are not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

For a long time scientists have argued that the extinction of the dinosaurs was related to climate change.

●

●

●

Answer choices

○A simple climate change does not explain some important data related to the extinction of the dinosaurs at the end of the Cretaceous.

○The retreat of the seaways at the end of the Cretaceous has not been fully

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explained.

○The abruptness of extinctions at the end of the Cretaceous and the high concentration of lr found in clay deposited at that time have fueled the development of a new hypothesis.

○Extreme changes in daily and seasonal climates preceded the retreat of the seas back into the major ocean basins.

○Some scientists hypothesize that the extinction of the dinosaurs resulted from the effects of an asteroid collision with Earth.

○Boundary clay layers like the one between the Mesozoic and Cenozoic are used by scientists to determine the rate at which an extinct species declined.

参考答案：

1. ○4

2. ○3

3. ○2

4. ○1

5. ○1

6. ○4

7. ○1

8.○1

9. ○2

10. ○4

11. ○2

12. ○3

13. ○3

14. ○1 , 3, 5

参考译文

恐龙的灭绝

很长时间以来，古生物学家们认为恐龙的灭亡是与因地质构造而引起的海洋和大陆位置变迁相关的气候变化所致。在整个白垩纪（中生代的最后的一段时间，这时恐龙正值繁盛），广阔的浅海覆盖了大量的陆地。各方面的数据，包括海床沉积中的地理化学证据，都表明白垩纪后期的气候比现在的气候要温和得多。白天不是很热，夜间也不是很寒冷。夏天不是太炎热，而冬天也不是太寒冷。大陆上的浅海可能使其附近的空气少受影响，以保持相对稳定的温度。

在白垩纪后期，地质资料表明这些浅海都从大陆退回到主要的海洋盆地内了，没有人明白为什么。大约在 100000 年内，海洋收缩了，世界的气候也随之变得更极端：白天更热，夜间更冷，夏天更热，冬天更冷。恐龙或许就是因为无法忍受这种严峻的气温变化因而灭绝。

如果真是这样，那么为什么冷血动物，比如蛇类、蜥蜴、乌龟和鳄鱼却能够幸免于寒冬和酷夏呢？这些动物都是依赖于气温以使其身体保持适合生存的温度。很难理解它们为什么毫不受影响，然而恐龙却如此的无能以至于无法适应，尤其是有些科学家认为恐龙是热血动物。批评者们也指出浅海在中生代曾有过无数次的进入大陆而又退回盆地的过程，所以为什么恐龙在前面的海洋起伏中能幸免于难，而在这一次中却不能呢？尽管最初人们这样认为，但是简单的与海平面高度有关的气候变化假设是不足以

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解释所有数据的。

对传统的关于恐龙灭绝解释的不满使得人们反过来惊奇的发现了新的理论。当人们对比白垩纪后期的岩层资料和新生代（中生代后面的一个时期）早期的资料时发现很多植物和动物都突然的消失了。在白垩纪最后的一层岩石和新生代的第一层岩石之间，常有一层很薄的粘土。科学家们感觉到他们可以通过确定这层一厘米厚的粘土层中元素铱的含量来推测其的沉积时间，进而推测大灭绝所用的时间。

自从地球的形成一来，铱元素在地球的便面上就不常见。因为它通常是以金属状态存在，并随着地球的冷却和固结而优先的合并到地核中了。在一些陨石中，依可能会高度富集，而这里常保存着太阳系内原始的化学组成。直到今天，小型的陨石也在连续不断的撞击地球，并掉落在陆地和海洋中。通过确定在一段给定时间内掉落在地球上的这种陨石的数量，科学家们就可以确定沉积隔层粘土的形成时间。这种计算表明形成这种沉积可能需要一百万年。然而其他可靠的证据则表明沉积这层粘土可能不需要一百万年。所以这种不正常的铱的富集可能需要一种特殊的解释。

考虑到这些事实，科学家们就假设有一个较大的小行星，直径差不多有 10 到 15 公里，曾与地球相撞，所以碰撞扬起的灰尘等就形成了这层粘土层。他们的计算表明撞击扬起的灰尘遮挡了阳光达几个月之久，阻止了植物的光合作用，将陆地上的气温降到了零点之下，导致酸雨，通过温室效应造成了长期的、严重的全球升温。这种对食物链和气候的极大扰乱将

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可使恐龙和其他生物在不到 50 年的时间内绝迹。

RUNNING WATER ON MARS

Photographic evidence suggests that liquid water once existed in great quantity on the surface of Mars. Two types of flow features are seen: runoff channels and outflow channels. Runoff channels are found in the southern highlands. These flow features are extensive systems—sometimes hundreds of kilometers in total length—of interconnecting, twisting channels that seem to merge into larger, wider channels. They bear a strong resemblance to river systems on Earth, and geologists think that they are dried-up beds of long-gone rivers that once carried rainfall on Mars from the mountains down into the valleys. Runoff channels on Mars speak of a time 4 billion years ago (the age of the Martian highlands), when the atmosphere was thicker, the surface warmer, and liquid water widespread.

Outflow channels are probably relics of catastrophic flooding on Mars long ago. They appear only in equatorial regions and generally do not form extensive interconnected networks. Instead, they are probably the paths taken by huge volumes of water draining from the southern highlands into the northern plains. The onrushing water arising from these flash floods likely also formed the odd teardrop-shaped “islands” (resembling the miniature versions seen in the wet sand of our beaches at low tide) that have been found on the plains close to the ends of the outflow channels. Judging from the width and depth of the channels, the flow rates must have been truly enormous—perhaps as much as a hundred times

greater than the 105 tons per second carried by the great Amazon river. Flooding shaped the outflow channels approximately 3 billion years ago, about the same times as the northern volcanic plains formed.

Some scientists speculate that Mars may have enjoyed an extended early Period during which rivers, lakes, and perhaps even oceans adorned its surface. A 2003 Mars Global Surveyor image shows what mission specialists think may be a delta—a fan-shaped network of channels and sediments where a river once flowed into a larger body of water, in this case a lake filling a crater in the southern highlands. Other researchers go even further, suggesting that the data provide evidence for large open expenses of water on the early Martian surface. A computer-generated view of the Martian north polar region shows the extent of what may have been an ancient ocean covering much of the northern lowlands. The Hellas Basin, which measures some 3,000 kilometers across and has a floor that lies nearly 9 kilometers below the basin's rim, is another candidate for an ancient Martian sea.

These ideas remain controversial. Proponents point to features such as the terraced "beaches" shown in one image, which could conceivably have been left behind as a lake or ocean evaporated and the shoreline receded. But detractors maintain that the terraces could also have been created by geological activity, perhaps related to the geologic forces that depressed the Northern Hemisphere far below the level of the south, in which case they have nothing whatever to do with

Martian water. Furthermore, Mars Global Surveyor data released in 2003 seem to indicate that the Martian surface contains too few carbonate rock layers—layers containing compounds of carbon and oxygen—that should have been formed in abundance in an ancient ocean. Their absence supports the picture of a cold, dry Mars that never experienced the extended mild period required to form lakes and oceans. However, more recent data imply that at least some parts of the planet did in fact experience long periods in the past during which liquid water existed on the surface.

Aside from some small-scale gullies (channels) found since 2000, which are inconclusive, astronomers have no direct evidence for liquid water anywhere on the surface of Mars today, and the amount of water vapor in the Martian atmosphere is tiny. Yet even setting aside the unproven hints of ancient oceans, the extent of the outflow channels suggests that a huge total volume of water existed on Mars in the past. Where did all the water go? The answer may be that virtually all the water on Mars is now locked in the permafrost layer under the surface, with more contained in the planet's polar caps.

Paragraph 1: Photographic evidence suggests that liquid water once existed in great quantity on the surface of Mars. Two types of flow features are seen: runoff channels and outflow channels. Runoff channels are found in the southern highlands. These flow features are extensive systems—sometimes hundreds of

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kilometers in total length—of interconnecting, twisting channels that seem to merge into larger, wider channels. They bear a strong resemblance to river systems on Earth, and geologists think that they are dried-up beds of long-gone rivers that once carried rainfall on Mars from the mountains down into the valleys. Runoff channels on Mars speak of a time 4 billion years ago (the age of the Martian highlands), when the atmosphere was thicker, the surface warmer, and liquid water widespread.

1. The word merge in the passage is closest in meaning to

○expand

○separate

○straighten out

○combine

2. What does the discussion in paragraph 1 of runoff channels in the southern highlands suggest about Mars?

○The atmosphere of Mars was once thinner than it is today.

○Large amounts of rain once fell on parts of Mars.

○The river systems of Mars were once more extensive than Earth's.

○The rivers of Mars began to dry up about 4 billion years ago.

Paragraph 2: Outflow channels are probably relics of catastrophic flooding on Mars long ago. They appear only in equatorial regions and generally do not form

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extensive interconnected networks. Instead, they are probably the paths taken by huge volumes of water draining from the southern highlands into the northern plains. The onrushing water arising from these flash floods likely also formed the odd teardrop-shaped “islands” (resembling the miniature versions seen in the wet sand of our beaches at low tide) that have been found on the plains close to the ends of the outflow channels. Judging from the width and depth of the channels, the flow rates must have been truly enormous—perhaps as much as a hundred times greater than the 105 tons per second carried by the great Amazon river. Flooding shaped the outflow channels approximately 3 billion years ago, about the same times as the northern volcanic plains formed.

3. The word relics in the passage is closest in meaning to

- ○remains
- ○sites
- ○requirements
- ○sources

4. The word miniature in the passage is closest in meaning to

- ○temporary
- ○small
- ○multiple
- ○familiar

5. In paragraph 2, why does the author include the information that 105 tons of water flow through the Amazon river per second?

○To emphasize the great size of the volume of water that seems to have flowed through Mars' outflow channels

○To indicate data used by scientists to estimate how long ago Mars' outflow channels were formed

○To argue that flash floods on Mars may have been powerful enough to cause tear-shaped "islands" to form

○To argue that the force of flood waters on Mars was powerful enough to shape the northern volcanic plains

6. According to paragraph 2, all of the following are true of the outflow channels on Mars EXCEPT:

○They formed at around the same time that volcanic activity was occurring on the northern plains.

○They are found only on certain parts of the Martian surface.

○They sometimes empty onto what appear to have once been the wet sands of tidal beaches.

○They are thought to have carried water northward from the equatorial regions.

Paragraph 3: Some scientists speculate that Mars may have enjoyed an extended early Period during which rivers, lakes, and perhaps even oceans

adorned its surface. A 2003 Mars Global Surveyor image shows what mission specialists think may be a delta—a fan-shaped network of channels and sediments where a river once flowed into a larger body of water, in this case a lake filling a crater in the southern highlands. Other researchers go even further, suggesting that the data provide evidence for large open expenses of water on the early Martian surface. A computer-generated view of the Martian north polar region shows the extent of what may have been an ancient ocean covering much of the northern lowlands. The Hellas Basin, which measures some 3,000 kilometers across and has a floor that lies nearly 9 kilometers below the basin's rim, is another candidate for an ancient Martian sea.

7. All of the following questions about geological features on Mars are answered in paragraph 3 EXCEPT:

○What are some regions of Mars that may have once been covered with an ocean?

○Where do mission scientists believe that the river forming the delta emptied?

○Approximately how many craters on Mars do mission scientists believe may once have been lakes filled with water?

○During what period of Mars' history do some scientists think it may have had large bodies of water?

8. According to paragraph 3, images of Mars' surface have been interpreted as

support for the idea that

- ○the polar regions of Mars were once more extensive than they are now
- ○a large part of the northern lowlands may once have been under water
- ○deltas were once a common feature of the Martian landscape
- ○the shape of the Hellas Basin has changed considerably over time

Paragraph 4: These ideas remain controversial. Proponents point to features such as the terraced “beaches” shown in one image, which could conceivably have been left behind as a lake or ocean evaporated and the shoreline receded. But detractors maintain that the terraces could also have been created by geological activity, perhaps related to the geologic forces that depressed the Northern Hemisphere far below the level of the south, in which case they have nothing whatever to do with Martian water. Furthermore, Mars Global Surveyor data released in 2003 seem to indicate that the Martian surface contains too few carbonate rock layers—layers containing compounds of carbon and oxygen—that should have been formed in abundance in an ancient ocean. Their absence supports the picture of a cold, dry Mars that never experienced the extended mild period required to form lakes and oceans. However, more recent data imply that at least some parts of the planet did in fact experience long periods in the past during which liquid water existed on the surface.

9. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in

important ways or leave out essential information.

○But detractors argue that geological activity may be responsible for the water associated with the terraces.

○But detractors argue that the terraces may have been formed by geological activity rather than by the presence of water.

○But detractors argue that the terraces may be related to geological forces in the Northern Hemisphere of Mars, rather than to Martian water in the south.

○But detractors argue that geological forces depressed the Northern Hemisphere so far below the level of the south that the terraces could not have been formed by water.

10. According to paragraph 4, what do the 2003 Global Surveyor data suggest About Mars?

○Ancient oceans on Mars contained only small amounts of carbon.

○The climate of Mars may not have been suitable for the formation of large bodies of water.

○Liquid water may have existed on some parts of Mars' surface for long periods of time.

○The ancient oceans that formed on Mars dried up during periods of cold, dry weather.

Paragraph 5: Aside from some small-scale gullies (channels) found since2000, which are inconclusive, astronomers have no direct evidence for liquid water

anywhere on the surface of Mars today, and the amount of water vapor in the Martian atmosphere is tiny. Yet even setting aside the unproven hints of ancient oceans, the extent of the past. Where did all the water go? The answer may be that virtually all the water on Mars is now locked in the permafrost layer under the surface, with more contained in the planet's polar caps.

11. The word hints in the passage is closest in meaning to

○clues

○features

○arguments

○effects

Paragraph 2: Outflow channels are probably relics of catastrophic flooding on Mars long ago. ■They appear only in equatorial regions and generally do not form extensive interconnected networks. ■Instead, they are probably the paths taken by huge volumes of water draining from the southern highlands into the northern plains. ■The onrushing water arising from these flash floods likely also formed the odd teardrop-shaped "islands" (resembling the miniature versions seen in the wet sand of our beaches at low tide) that have been found on the plains close to the ends of the outflow channels. ■Judging from the width and depth of the channels, the flow rates must have been truly enormous—perhaps as much as a hundred times greater than the 105 tons per second carried by the great Amazon river. Flooding shaped the outflow channels approximately 3 billion years ago,

about the same times as the northern volcanic plains formed.

12. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

These landscape features differ from runoff channels in a number of ways.

Where would the sentence best fit?

13. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

There is much debate concerning whether Mars once had water.

●

●

●

Answer choices

○Mars' runoff and outflow channels are large-scale, distinctive features that suggest that large quantities of liquid water once flowed on Mars.

○Although some researchers claim that Mars may once have had oceans, others dispute this, pointing to an absence of evidence or offering alternative interpretations of evidence.

○Various types of images have been used to demonstrate that most of Martian surface contains evidence of flowing water.

○The runoff and outflow channels of Mars apparently carried a higher volume of water and formed more extensive networks than do Earth's river systems.

○There is very little evidence of liquid water on Mars today, and it is assumed that all the water that once existed on the planet is frozen beneath its surface.

○While numerous gullies have been discovered on Mars since 2000, many astronomers dismiss them as evidence that Mars once had liquid water.

参考答案：

1. ○4

2. ○2

3. ○1

4. ○2

5. ○1

6. ○3

7. ○3

8.○2

9. ○2

10. ○2

11. ○1

12. ○1

13. ○1, 2, 5

参考译文

火星上的流水

来自照片的证据显示在火星的表面曾有过大量的液态水。两种流动形式已经被发现：径流通道和外流通道。径流通道发现于南部的高地。这些流动形式有着庞大的系统——有时竟有数百千米长——他们相互交错，扭转，并可能汇入更大更宽的通道中。它们和地球上的河流系统非常相似，地质学家们认为它们是以前曾将火星上的雨水从高山携带到峡谷中的那些河流干涸后的遗迹。火星上的径流通道存在于 4 百万年以前（就是火星高地的年龄），那时候火星的大气层更厚，地表更暖和，并且液态水分布很广。

外流通道可能是很久以前火星上洪灾的遗迹。它们只形成于赤道附近，并一般没有形成广泛的交错的网络。相反，它们可能是携带大量水从南部高地到北部平原的排水系统。由泛滥的洪水而产生的激流可能也形成奇怪的泪滴状小岛（就像是在低潮时湿沙地或海滩上看到的缩小版本一样），已经在靠近出流通道末尾处的平原上被看到。从这些通道的宽度和深度可判断，当时流速一定很大——有可能是亚马逊河的每秒钟 105 吨的流量的一百多倍。大约在三百万年以前，北部火山平原形成的同时，洪水改变了外流通道的形状。

一些科学家认为早期的火星上广泛存在着河流，湖泊甚至是海洋。一份 2003 年的对火星全球的调查照片显示了一个科学家们认为是三角洲的构造——一个扇形的沉积物和水流通道的网络，河流可能是从这里流入了

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一个更大的水体；在这种情况下，它可能是南部高地的一个火山口湖泊。其他研究者做了更大胆的猜测，他们认为那些数据表明早期在火星表面存在大量的水。一张关于火星北部极地地区的电脑图片说明有可能有一个古老的海洋覆盖了大部分北部的低洼处。那座有大约 3000 公里宽，9 公里深的 Hellas 盆地也可能是火星海洋。

这些观点仍然有争议。支持者们指出照片里显示的台地“海滩”可以是由湖泊或者海洋蒸发干涸之后或者海退之后形成的。但是反对者认为这些台地也可能是由于地质活动造成的，即由于北半球的地质压力要远比南半球的小得多而造成的，在这种情况下，他们就和火星水系没有任何关系。而且，2003 发布的火星全球调查数据也表明火星表面含有太少的碳化岩层——含有碳氧化合物的岩层——他们应该是在古代海洋中大量形成的。这些岩层的缺失支持了火星是一个又冷又干燥的星球这一说法，并且不可能拥有形成湖泊和海洋的温和气候。然而，更多的数据现在表明至少该星球上的一些部分表面的确在过去的很长时间内存在液态水。

除了在 2000 年发现了一些小规模的、不确定的溪谷以外，宇航员到目前为止还没有在星球的什么地方找到液态水存在的直接证据。而且火星大气中的水蒸气的含量也是微乎其微的。然而就算不考虑尚未证明的古代海洋存在的观点，出流通道的广泛存在就足以证明在火星上曾有大量的水体，水都去了哪里呢？答案可能是火星上所有的水实际上现在已经封存在其地下的永久冻层中，并且在极地地区最多。

Colonizing the Americas via the Northwest Coast

It has long been accepted that the Americas were colonized by a migration of peoples from Asia, slowly traveling across a land bridge called Beringia (now the Bering Strait between northeastern Asia and Alaska) during the last Ice Age. The first water craft theory about the migration was that around 11,000-12,000 years ago there was an ice-free corridor stretching from eastern Beringia to the areas of North America south of the great northern glaciers. It was the midcontinental corridor between two massive ice sheets-the Laurentide to the west-that enabled the southward migration. But belief in this ice-free corridor began to crumble when paleoecologist Glen MacDonald demonstrated that some of the most important radiocarbon dates used to support the existence of an ice-free corridor were incorrect. He persuasively argued that such an ice-free corridor did not exist until much later, when the continental ice began its final retreat.

Support is growing for the alternative theory that people using watercraft, possibly skin boats, moved southward from Beringia along the Gulf of Alaska and then southward along the Northwest Coast of North America possibly as early as 16,000 years ago. This route would have enabled humans to enter southern areas

of the Americans prior to the melting of the continental glaciers. Until the early 1970s, most archaeologists did not consider the coast a possible migration route into the Americans because geologists originally believed that during the last Ice Age the entire Northwest Coast was covered by glacial ice. It had been assumed that the ice extended westward from the Alaskan/Canadian mountains to the very edge of the continental shelf, the flat, submerged part of the continent that extend into the ocean. This would have created a barrier of ice extending from the Alaska Peninsula, through the Gulf of Alaska and southward along the Northwest Coast of North America to what is today the state of Washington.

The most influential proponent of the coastal migration route has been Canadian archaeologist Knut Fladmark. He theorized that with the use of watercraft, people gradually colonized unglaciated refuges and areas along the continental shelf exposed by the lower sea level. Fladmark's hypothesis received additional support from the fact that the greatest diversity in Native American languages occurs along the west coast of the Americans, suggesting that this region has been settled the longest.

More recent geologic studies documented deglaciation and the existence of ice-free areas throughout major coastal areas of British Columbia, Canada, by 13,000 years ago. Research now indicates that sizable areas of southeastern Alaska along the inner continental shelf were not covered by ice toward the end of the last Ice Age. One study suggests that except for a 250-mile coastal area between

southwestern British Columbia and Washington State, the Northwest Coast of North America was largely free of ice by approximately 16,000 years ago. Vast areas along the coast may have been deglaciated beginning around 16,000 years ago, possibly providing a coastal corridor for the movement of plants, animals, and humans sometime between 13,000 and 14,000 years ago.

The coastal hypothesis has gained increasing support in recent years because the remains of large land animals, such as caribou and brown bears, have been found in southeastern Alaska dating between 10,000 and 12,500 years ago. This is the time period in which most scientists formerly believed the area to be inhospitable for humans. It has been suggested that if the environment were capable of supporting breeding populations of bears, there would have been enough food resources to support humans. Fladmark and others believe that the first human colonization of America occurred by boat along the Northwest Coast during the very late Ice Age, possibly as early as 14,000 years ago. The most recent geologic evidence indicates that it may have been possible for people to colonize ice-free regions along the continental shelf that were still exposed by the lower sea level between 13,000 and 14,000 ago.

The coastal hypothesis suggests an economy based on marine mammal hunting, saltwater fishing gathering, and the use of watercraft. Because of the barrier of ice to the east, the Pacific Ocean to the west, and populated areas to the north, there may have been a greater impetus for people to move in a southerly

direction.

Paragraph 1: It has long been accepted that the Americas were colonized by a migration of peoples from Asia, slowly traveling across a land bridge called Beringia (now the Bering Strait between northeastern Asia and Alaska) during the last Ice Age. The first water craft theory about the migration was that around 11,000-12,000 years ago there was an ice-free corridor stretching from eastern Beringia to the areas of North America south of the great northern glaciers. It was the midcontinental corridor between two massive ice sheets-the Laurentide to the west-that enabled the southward migration. But belief in this ice-free corridor began to crumble when paleoecologist Glen MacDonald demonstrated that some of the most important radiocarbon dates used to support the existence of an ice-free corridor were incorrect. He persuasively argued that such an ice-free corridor did not exist until much later, when the continental ice began its final retreat.

1. According to paragraph 1, the theory that people first migrated to the Americans by way of an ice-free corridor was seriously called into question by

○paleoecologist Glen MacDonald's argument that the original migration occurred much later than had previously been believed

○the demonstration that certain previously accepted radiocarbon dates were incorrect

○evidence that the continental ice began its final retreat much later than had previously been believed

○research showing that the ice-free corridor was not as long lasting as had been widely assumed

2. The word persuasively in the passage is closest in meaning to

○aggressively

○inflexibly

○convincingly

○carefully

Paragraph 2: Support is growing for the alternative theory that people using watercraft, possibly skin boats, moved southward from Beringia along the Gulf of Alaska and then southward along the Northwest Coast of North America possibly as early as 16,000 years ago. This route would have enabled humans to enter southern areas of the Americans prior to the melting of the continental glaciers. Until the early 1970s, most archaeologists did not consider the coast a possible migration route into the Americans because geologists originally believed that during the last Ice Age the entire Northwest Coast was covered by glacial ice. It had been assumed that the ice extended westward from the Alaskan/Canadian mountains to the very edge of the continental shelf, the flat, submerged part of the continent that extend into the ocean. This would have created a barrier of ice extending from the Alaska Peninsula, through the Gulf of Alaska and southward

along the Northwest Coast of North America to what is today the state of Washington.

3. Paragraph 2 begins by presenting a theory and then goes on to

- ○discuss why the theory was rapidly accepted but then rejected
- ○present the evidence on which the theory was based
- ○cite evidence that now shows that the theory is incorrect
- ○explain why the theory was not initially considered plausible

4. The phrase prior to is closest in meaning to

- ○before
- ○immediately after
- ○during
- ○in spite of

5. Paragraph 2 supports the idea that, before the 1970s, the most archaeologists held which of the following views about the earliest people to reach the Americas?

- ○They could not have sailed directly from Beringia to Alaska and then southward because, it was thought, glacial ice covered the entire coastal region.
- ○They were not aware that the climate would continue to become milder
- ○They would have had no interest in migrating southward from Beringia until after the continental glaciers had begun to melt

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○They lacked the navigational skills and appropriate boats needed long-distance trips.

Paragraph 3: The most influential proponent of the coastal migration route has been Canadian archaeologist Knut Fladmark. He theorized that with the use of watercraft, people gradually colonized unglaciated refuges and areas along the continental shelf exposed by the lower sea level. Fladmark's hypothesis received additional support from the fact that the greatest diversity in Native American languages occurs along the west coast of the Americans, suggesting that this region has been settled the longest.

6. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways to leave out essential information.

○Because this region has been settled the longest, it also displays the greatest diversity in Native American languages.

○Fladmark's hypothesis states that the west coast of the Americas has been settled longer than any other region.

○The fact that the greatest diversity of Native American languages occurs along the west coast of the Americans lends strength to Fradmark's hypothesis

○According to Fladmark, Native American languages have survived the longest along the west coast of the Americas.

Paragraph 4: More recent geologic studies documented deglaciation and the existence of ice-free areas throughout major coastal areas of British Columbia, Canada, by 13,000 years ago. Research now indicates that sizable areas of southeastern Alaska along the inner continental shelf were not covered by ice toward the end of the last Ice Age. One study suggests that except for a 250-mile coastal area between southwestern British Columbia and Washington State, the Northwest Coast of North America was largely free of ice by approximately 16,000 years ago. Vast areas along the coast may have been deglaciated beginning around 16,000 years ago, possibly providing a coastal corridor for the movement of plants, animals, and humans sometime between 13,000 and 14,000 years ago.

7. The author's purpose in paragraph 4 is to

○indicate that a number of recent geologic studies seem to provide support for the coastal hypothesis

○indicate that coastal and inland migrations may have happened simultaneously

○explain why humans may have reached America's northwest coast before animals and plants did

○show that the coastal hypothesis may explain how people first reached Alaska but it cannot explain how people reached areas like modern British Columbia and Washington State

8. The word Vast in the passage is closest in meaning to

○Frozen

○Various

○Isolated

○Huge

Paragraph 5: The coastal hypothesis has gained increasing support in recent years because the remains of large land animals, such as caribou and brown bears, have been found in southeastern Alaska dating between 10,000 and 12,500 years ago. This is the time period in which most scientists formerly believed the area to be inhospitable for humans. It has been suggested that if the environment were capable of supporting breeding populations of bears, there would have been enough food resources to support humans. Fladmark and others believe that the first human colonization of America occurred by boat along the Northwest Coast during the very late Ice Age, possibly as early as 14,000 years ago.

9. According to paragraph 5, the discovery of the remains of large land animals supports the coastal hypothesis by providing evidence that

○humans were changing their hunting techniques to adapt to coastal rather than inland environments

○animals had migrated from the inland to the coasts, an indication that a midcontinental ice-free corridor was actually implausible

○humans probably would have been able to find enough resources along the coastal corridor

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○the continental shelf was still exposed by lower sea levels during the period when the southward migration of people began

10. The word inhospitable in the passage is closest in meaning to

○not familiar

○not suitable

○not dangerous

○not reachable

11. According to paragraph 5, the most recent geologic research provides support for a first colonization of America dating as far back as

○16,000 years ago

○14,000 years ago

○12,500 years ago

○10,000 years ago

Paragraph 6: The coastal hypothesis suggests an economy based on marine mammal hunting, saltwater fishing gathering, and the use of watercraft. Because of the barrier of ice to the east, the Pacific Ocean to the west, and populated areas to the north, there may have been a greater impetus for people to move in a southerly direction.

12. The word impetus in the passage is closest in meaning to

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○chance

○protection

○possibility

○incentive

Paragraph 1: It has long been accepted that the Americas were colonized by a migration of peoples from Asia, slowly traveling across a land bridge called Beringia (now the Bering Strait between northeastern Asia and Alaska) during the last Ice Age. ■The first water craft theory about the migration was that around 11,000-12,000 years ago there was an ice-free corridor stretching from eastern Beringia to the areas of North America south of the great northern glaciers. It was the midcontinental corridor between two massive ice sheets-the Laurentide to the west-that enabled the southward migration. ■But belief in this ice-free corridor began to crumble when paleoecologist Glen MacDonald demonstrated that some of the most important radiocarbon dates used to support the existence of an ice-free corridor were incorrect. ■He persuasively argued that such an ice-free corridor did not exist until much later, when the continental ice began its final retreat. ■

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

Moreover, other evidence suggests that even if an ice-free corridor did exist, it would have lacked the resources needed for human

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colonization.

Where could the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some answer choices do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

Recent evidence favors a rival to the long-standing theory that the Americas were colonized 11,000-12,000 years ago by people migrating south from Beringia along a midcontinental ice-free corridor

●

●

●

Answer Choices

○Evidence that an ice-free corridor between two ice sheets developed when the continental ice first began to melt came primarily from radiocarbon dating.

○There is growing support for the theory that migration took place much earlier, by sea, following a coastal route along Alaska and down the northwest coast.

○Recent geologic evidence indicates that contrary to what had been believed, substantial areas along the coast were free of ice as early as 16,000 years ago.

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○Research now indicates that the parts of the inner continental shelf that remained covered with ice were colonized by a variety of early human groups well adapted to living in extremely cold environments.

○There is evidence suggesting that areas along the coast may have contained enough food resources between 13,000 and 14,000 years ago to have made human colonization possible.

○Even though the northern part of the continent allowed for a more varied economy, several early human groups quickly moved south.

参考答案：

1. ○2

2. ○3

3. ○4

4. ○1

5. ○1

6. ○3

7. ○1

8.○4

9. ○3

10. ○2

11. ○2

12. ○4

13. ○4

14. ○2, 3, 5

参考译文

从西海岸殖民美洲

这种观念被人们接受很长时间了：美洲被一群来自亚洲的移民殖民统治着，他们在上一个冰河时代缓慢的跨越了一个叫做白令的大陆桥（现在白令海峡位于东北亚和阿拉斯加之间）。关于这些迁徙的第一个水路理论表明，大概在 11000 到 12000 年前，有一个不冻的走廊，它从白令海峡东部延伸到北美（大北部冰河的南部），连在两个巨大冰床间的半大陆性走廊，向西的 Laurentide 使往南的迁移成为可能。但是当生态学者 Glen MacDonald 证明一些用来支持不冻走廊存在的重要放射性碳时间不正确时，对于不冻走廊的信念就被粉碎了。他令人信服的主张那样的不冻走廊直到很久以后才出现，那时大陆冰开始最后的消退。

另外一种理论得到越来越多的人的支持，它认为可能早在 16,000 年前，人们使用船只，也许是那种兽皮做的小船，从白令沿着阿拉斯加海湾，然后沿着北美的西北海岸前进。这条路线使人类可以在大陆冰河解冻之前进入美州南部地区。直到 20 世纪 70 年代早期，大部分考古学家都不认为海岸可能是进入美州的移民路线，因为地理学家一开始就坚信整个西北海岸在上个冰河时代是被冰覆盖的。人们猜测冰从阿拉斯加、加拿大山脉向西延伸到大陆架的边界，也就是大陆延伸到海洋中而被淹没的部分。这样就形成了一个由冰构成的，从阿拉斯加半岛，经过阿拉斯加海湾，向南沿着北美州西北海岸延伸至今天的华盛顿州的冰层。

海岸移民路线的最有影响力的支持者是加拿大考古学家 Knut Fladmark。他认为通过船只的使用，人们逐渐殖民到没有冰冻的地方以及沿着大陆架的、由于海平面较低而裸露出来的地区。Fladmark 的假设从一个事实那得到了更多的支持，因为美国本土语言的最大多样性出现在西海岸沿岸，这就表明这个地区是人类定居时间最早的。

更多最近的地质研究证明了 13000 年前在英属哥伦比亚、加拿大主要海岸地区无冰区域存在和结冰。现在研究表明，直到上个冰河时代末期，阿拉斯加东南、沿大陆架内的大部分地区并没有被冰层覆盖。一项研究表明，除了在英属哥伦比亚东南部和华盛顿州之间的 250 英里的海岸地区以外，北美的西北海岸在大概 16000 年之前都是没有冰的。沿海的辽阔地区的冰川在大约 16000 年前开始融化，这就为 13000 前 到 14000 年前的某一段时间内植物、动物和人类的迁移提供了一个海岸走廊。

海岸走廊假设近些年得到了越来越多的支持，因为一些大型动物（比如北美驯鹿，棕熊）的遗迹出现在阿拉斯加东南部地区，其时间为 10000 年到 12500 年之前。之前大部分科学家认为此时此地不适合人类生存的。如果一种环境能满足熊的繁殖，那么它就有足够的食物来源来供应人类的生存。Fladmark 和其他科学家都认为人类第一次乘船沿着西北岸到达美洲发生在冰河时代的晚期，可能早达 14000 年以前。多数最新的地质资料表明：13000 年 至 14000 年前，人们殖民因低海平面而裸露的大陆架沿岸的无冰区域是可能的。

海岸假设提出了一个以捕食海洋哺乳动物、搜捕咸水鱼类、使用船只为基础的自然经济。由于东部是冰障，西部是太平洋，北部是移民区，所以有一股强大的力量促使人们往南方迁移。

REFLECTION IN TEACHING

Teachers, it is thought, benefit from the practice of reflection, the conscious act of thinking deeply about and carefully examining the interactions and events within their own classrooms. Educators T. Wildman and J. Niles (1987) describe a scheme for developing reflective practice in experienced teachers. This was justified by the view that reflective practice could help teachers to feel more intellectually involved in their role and work in teaching and enable them to cope with the paucity of scientific fact and the uncertainty of knowledge in the discipline of teaching.

Wildman and Niles were particularly interested in investigating the conditions under which reflection might flourish-a subject on which there is little guidance in the literature. They designed an experimental strategy for a group of teachers in Virginia and worked with 40 practicing teachers over several years. They were concerned that many would be "drawn to these new, refreshing conceptions of teaching only to find that the void between the abstractions and the realities of teacher reflection is too great to bridge. Reflection on a complex task such as teaching is not easy." The teachers were taken through a program of talking about teaching events, moving on to reflecting about specific issues in a supported, and later an independent, manner.

Wildman and Niles observed that systematic reflection on teaching required a

sound ability to understand classroom events in an objective manner. They describe the initial understanding in the teachers with whom they were working as being "utilitarian...and not rich or detailed enough to drive systematic reflection." Teachers rarely have the time or opportunities to view their own or the teaching of others in an objective manner. Further observation revealed the tendency of teachers to evaluate events rather than review the contributory factors in a considered manner by, in effect, standing outside the situation.

Helping this group of teachers to revise their thinking about classroom events became central. This process took time and patience and effective trainers. The researchers estimate that the initial training of the same teachers to view events objectively took between 20 and 30 hours, with the same number of hours again being required to practice the skills of reflection.

Wildman and Niles identify three principles that facilitate reflective practice in a teaching situation. The first is support from administrators in an education system, enabling teachers to understand the requirements of reflective practice and how it relates to teaching students. The second is the availability of sufficient time and space. The teachers in the program described how they found it difficult to put aside the immediate demands of others in order to give themselves the time they needed to develop their reflective skills. The third is the development of a collaborative environment with support from other teachers. Support and encouragement were also required to help teachers in the program cope with

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aspects of their professional life with which they were not comfortable. Wildman and Niles make a summary comment: "Perhaps the most important thing we learned is the idea of the teacher-as-reflective-practitioner will not happen simply because it is a good or even compelling idea."

The work of Wildman and Niles suggests the importance of recognizing some of the difficulties of instituting reflective practice. Others have noted this, making a similar point about the teaching profession's cultural inhibitions about reflective practice. Zeichner and Liston (1987) point out the inconsistency between the role of the teacher as a (reflective) professional decision maker and the more usual role of the teacher as a technician, putting into practice the ideas of others. More basic than the cultural issues is the matter of motivation. Becoming a reflective practitioner requires extra work (Jaworski, 1993) and has only vaguely defined goals with, perhaps, little initially perceivable reward and the threat of vulnerability. Few have directly questioned what might lead a teacher to want to become reflective. Apparently, the most obvious reason for teachers to work toward reflective practice is that teacher educators think it is a good thing. There appear to be many unexplored matters about the motivation to reflect-for example, the value of externally motivated reflection as opposed to that of teachers who might reflect by habit.

Paragraph 1: Teachers, it is thought, benefit from the practice of reflection, the

conscious act of thinking deeply about and carefully examining the interactions and events within their own classrooms. Educators T. Wildman and J. Niles (1987) describe a scheme for developing reflective practice in experienced teachers. This was justified by the view that reflective practice could help teachers to feel more intellectually involved in their role and work in teaching and enable them to cope with the paucity of scientific fact and the uncertainty of knowledge in the discipline of teaching.

1. The word justified in the passage is closest in meaning to

○supported

○shaped

○stimulated

○suggested

2. According to paragraph 1, it was believed that reflection could help teachers

○understand intellectual principles of teaching

○strengthen their intellectual connection to their work

○use scientific fact to improve discipline and teaching

○adopt a more disciplined approach to teaching

Paragraph 2: Wildman and Niles were particularly interested in investigating the conditions under which reflection might flourish-a subject on which there is little guidance in the literature. They designed an experimental strategy for a group

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of teachers in Virginia and worked with 40 practicing teachers over several years. They were concerned that many would be "drawn to these new, refreshing conceptions of teaching only to find that the void between the abstractions and the realities of teacher reflection is too great to bridge. Reflection on a complex task such as teaching is not easy." The teachers were taken through a program of talking about teaching events, moving on to reflecting about specific issues in a supported, and later an independent, manner.

3. The word flourish in the passage is closest in meaning to

○continue

○occur

○succeed

○apply

4. All of the following are mentioned about the experimental strategy described in paragraph 2 EXCEPT:

○It was designed so that teachers would eventually reflect without help from others

○It was used by a group of teachers over a period of years.

○It involved having teachers take part in discussions of classroom events

○It involved having teachers record in writing their reflections about teaching

5. According to paragraph 2, Wildman and Niles worried that the teachers they were working with might feel that

○the number of teachers involved in their program was too large

○the concepts of teacher reflection were so abstract that they could not be applied

○the ideas involved in reflection were actually not new and refreshing

○several years would be needed to acquire the habit of reflecting on their teaching

Paragraph 3: Wildman and Niles observed that systematic reflection on teaching required a sound ability to understand classroom events in an objective manner. They describe the initial understanding in the teachers with whom they were working as being "utilitarian...and not rich or detailed enough to drive systematic reflection." Teachers rarely have the time or opportunities to view their own or the teaching of others in an objective manner. Further observation revealed the tendency of teachers to evaluate events rather than review the contributory factors in a considered manner by, in effect, standing outside the situation.

6. The word objective in the passage is closest in meaning to

○unbiased

○positive

○systematic

○thorough

7. According to paragraph 3, what did the teachers working with Wildman and Niles often fail to do when they attempted to practice reflection?

○Correctly calculate the amount of time needed for reflection

○Provide sufficiently detailed descriptions of the methods they used to help them reflect

○Examine thoughtfully the possible causes of events in their classrooms

○Establish realistic goals for themselves in practicing reflection

Paragraph 4: Helping this group of teachers to revise their thinking about classroom events became central. This process took time and patience and effective trainers. The researchers estimate that the initial training of the same teachers to view events objectively took between 20 and 30 hours, with the same number of hours again being required to practice the skills of reflection.

8. How is paragraph 4 related to other aspects of the discussion of reflection in the passage?

○It describes and comments on steps taken to overcome problems identified earlier in the passage

○It challenges the earlier claim that teachers rarely have the time to think about their own or others' teaching

○It identifies advantages gained by teachers who followed the training program described earlier in the passage

○It explains the process used to define the principles discussed later in the passage

Paragraph 5: Wildman and Niles identify three principles that facilitate reflective practice in a teaching situation. The first is support from administrators in an education system, enabling teachers to understand the requirements of reflective practice and how it relates to teaching students. The second is the availability of sufficient time and space. The teachers in the program described how they found it difficult to put aside the immediate demands of others in order to give themselves the time they needed to develop their reflective skills. The third is the development of a collaborative environment with support from other teachers. Support and encouragement were also required to help teachers in the program cope with aspects of their professional life with which they were not comfortable. Wildman and Niles make a summary comment: "Perhaps the most important thing we learned is the idea of the teacher-as-reflective-practitioner will not happen simply because it is a good or even compelling idea."

9. The word compelling in the passage is closest in meaning to

○commonly held

○persuasive

○original

○practical

Paragraph 6: The work of Wildman and Niles suggests the importance of recognizing some of the difficulties of instituting reflective practice. Others have noted this, making a similar point about the teaching profession's cultural inhibitions about reflective practice. Zeichner and Liston (1987) point out the inconsistency between the role of the teacher as a (reflective) professional decision maker and the more usual role of the teacher as a technician, putting into practice the ideas of others. More basic than the cultural issues is the matter of motivation. Becoming a reflective practitioner requires extra work (Jaworski, 1993) and has only vaguely defined goals with, perhaps, little initially perceivable reward and the threat of vulnerability. Few have directly questioned what might lead a teacher to want to become reflective. Apparently, the most obvious reason for teachers to work toward reflective practice is that teacher educators think it is a good thing. There appear to be many unexplored matters about the motivation to reflect-for example, the value of externally motivated reflection as opposed to that of teachers who might reflect by habit.

10. According to paragraph 6, teachers may be discouraged from reflecting because

○it is not generally supported by teacher educators

○the benefits of reflection may not be apparent immediately

○it is impossible to teach and reflect on one's teaching at the same time

○they have often failed in their attempts to become reflective practitioners

11. Which of the sentences below expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information

○The practice of being reflective is no longer simply a habit among teachers but something that is externally motivated

○Most teachers need to explore ways to form the habit of reflection even when no external motivation exists

○Many aspects of the motivation to reflect have not been studied, including the comparative benefits of externally motivated and habitual reflection among teachers

○There has not been enough exploration of why teachers practice reflection as a habit with or without external motivation

Paragraph 4: Helping this group of teachers to revise their thinking about classroom events became central. ■This process took time and patience and effective trainers. ■The researchers estimate that the initial training of the same teachers to view events objectively took between 20 and 30 hours, with the same number of hours again being required to practice the skills of reflection.

Paragraph 5: ■Wildman and Niles identify three principles that facilitate reflective practice in a teaching situation. ■The first is support from administrators in an education system, enabling teachers to understand the requirements of reflective practice and how it relates to teaching students. The second is the availability of sufficient time and space. The teachers in the program

described how they found it difficult to put aside the immediate demands of others in order to give themselves the time they needed to develop their reflective skills. The third is the development of a collaborative environment with support from other teachers. Support and encouragement were also required to help teachers in the program cope with aspects of their professional life with which they were not comfortable. Wildman and Niles make a summary comment: "Perhaps the most important thing we learned is the idea of the teacher-as-reflective-practitioner will not happen simply because it is a good or even compelling idea."

12. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

However, changing teachers' thinking about reflection will not succeed unless there is support for reflection in the teaching environment.

Where could the sentence best fit?

13. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some answer choices do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

Wildman and Niles have conducted research on reflection in teaching

●

●

●

Answer Choices

○Through their work with Virginia teachers, Wildman and Niles proved conclusively that reflection, though difficult, benefits both teachers and students.

○Wildman and Niles found that considerable training and practice are required to understand classroom events and develop the skills involved in reflection.

○Wildman and Niles identified three principles that teachers can use to help themselves cope with problems that may arise as a result of reflection.

○Wildman and Niles concluded that teachers need sufficient resources as well as the cooperation and encouragement of others to practice reflection.

○There are numerous obstacles to implementing reflection in schools and insufficient understanding of why teachers might want to reflect.

○Whether teachers can overcome the difficulties involved in reflection may depend on the nature and intensity of their motivation to reflect.

参考答案：

1. ○1

2. ○2

3. ○3

4. ○4

5. ○2

6. ○1

7. ○3

8.○1

9. ○2

10. ○2

11. ○3

12. ○3

13. ○2, 4, 5

参考译文

教学中的反思

教师被认为受益于反思实践——有意识的更深入思考、仔细的检查他们教室里发生的事件以及相互影响。教育家 T. Wildman 和 J. Niles(1987)描述了一个在资深教师中开展反思实践的方案。这是合理的，因为人们认为反思的实践可以帮助老师们更加理性的对待他们的角色和他们从事的事业，并可以让他们能在教学准则中处理科学事实的缺乏和知识的不确定。

Wildman 和 Niles 都特别喜欢研究在哪种情况下反思可能大量出现——一个几乎没有任何文献指导的课题。他们给维吉利亚的一组教师设计了一个实验策略，并在几年内研究了 40 位教师。他们担心很多人可能认为沉浸在这种全新的教育概念中的结果就是，发现教师反思的抽象概念和现实之间的鸿沟太大而无法逾越。要反思像教学这样复杂的事件不是容易的。老师们都参加了关于教学事件计划的讨论，紧接着在工作人员的协助下去反思具体问题，然后是独立反思。

Wildman 和 Niles 观察到系统教学反思需要一种以客观的方式来理解教室里发生事件的能力。他们起初认为参与研究的教师们太功利，并不是足够丰富和详细以促使系统反思的产生。教师们很少有机会和时间去客观的观察他们自己和其他老师的教学。更深的研究发现教师们更愿意评价事件而不是站在事件之外洞察一个事件的促进因素。

帮助这组教师修订他们关于课堂事件的认识变成了关键问题。这个过程需要时间和耐心以及有效的受训者。研究者认为训练同一个教师使他客观的看待事情需要大约 20 到 30 小时，而反思技巧的练习同样需要这么多时间。

Wildman 和 Niles 确定了促进在教学环境中实现反思行为的 3 个原则。第一就是来自教学系统管理层的支持，这使得教师们明白反思实践的必要条件，并知道它与教学之间的联系。第二就是需要足够的时间和空间。组织中的教师们抱怨说让他们放弃别人当时的要求而为自己腾出时间去提升自己的反思能力是很困难的。第三就是以其他教师的支持为基础的亲密无间的环境。组织中的教师同样需要支持和鼓励以帮助他们去应付他们职业生活中的不如意的方面。Wildman 和 Niles 作出了一个总结性的评论：“或许我们学到的最重要的观点就是教师不会因为这是好的，或者甚至是不可或缺的观念而自发的开展教学反思。”

Wildman 和 Niles 的工作表明认识进行反思的某些困难的重要性。也有其他人知道这个，并指出相似的关于反思行为的教学职业文化阻碍。Zeichner 和 Liston(1987)指出作为一个反思者的教师和作为一个将其他人观念付诸实施的教师之间，存在着角色上的不一致。比文化问题更基本的是动机问题。成为一个反思教学的执行者需要额外的付出（Jaworski,1993）而且只有一个模糊的目标，甚至不仅没有显而易见的回报，反而有易受责难的威胁。很少人直接质疑什么可能让一个教师想变成反思型教师。显然，使教师朝着反思行为奋斗的最直接的原因是教师教育

家认为这是一件很好的事情。关于反思的动力存在许多未知的问题，例如外部驱动的反思的价值与通过习惯进行反思的价值是不同的。

THE ARRIVAL OF PLANT LIFE IN HAWAII

When the Hawaiian islands emerged from the sea as volcanoes, starting about five million years ago, they were far removed from other landmasses. Then, as blazing sunshine alternated with drenching rains, the harsh, barren surfaces of the black rocks slowly began to soften. Winds brought a variety of life-forms.

Spores light enough to float on the breezes were carried thousands of miles from more ancient lands and deposited at random across the bare mountain flanks. A few of these spores found a toehold on the dark, forbidding rocks and grew and began to work their transformation upon the land. Lichens were probably the first successful flora. These are not single individual plants; each one is a symbiotic combination of an alga and a fungus. The algae capture the Sun's energy by

photosynthesis and store it in organic molecules. The fungi absorb moisture and mineral salts from the rocks, passing these on in waste products that nourish algae. It is significant that the earliest living things that built communities on these islands are examples of symbiosis, a phenomenon that depends upon the close cooperation of two or more forms of life and a principle that is very important in island communities.

Lichens helped to speed the decomposition of the hard rock surfaces, preparing a soft bed of soil that was abundantly supplied with minerals that had been carried in the molten rock from the bowels of Earth. Now, other forms of life could take hold: ferns and mosses (two of the most ancient types of land plants) that flourish even in rock crevices. These plants propagate by producing spores-tiny fertilized cells that contain all the instructions for making a new plant-but the spores are unprotected by any outer coating and carry no supply of nutrient. Vast numbers of them fall on the ground beneath the mother plants. Sometimes they are carried farther afield by water or by wind. But only those few spores that settle down in very favorable locations can start new life; the vast majority fall on barren ground. By force of sheer numbers, however, the mosses and ferns reached Hawaii, survived, and multiplied. Some species developed great size, becoming tree ferns that even now grow in the Hawaiian forests.

Many millions of years after ferns evolved (but long before the Hawaiian Island were born from the sea), another kind of flora evolved on Earth: the

seed-bearing plants. This was a wonderful biological invention. The seed has an outer coating that surrounds the genetic material of the new plant, and inside this covering is a concentrated supply of nutrients. Thus, the seed's chances of survival are greatly enhanced over those of the naked spore. One type of seed-bearing plant, the angiosperm, includes all forms of blooming vegetation. In the angiosperm the seeds are wrapped in an additional layer of covering. Some of these coats are hard-like the shell of a nut-for extra protection. Some are soft and tempting, like a peach or a cherry. In some angiosperm the seeds are equipped with gossamer wings, like the dandelion and milkweed seeds. These new characteristics offered better ways for the seeds to move to new habitats. They could travel through the air, float in water, and lie dormant for many months.

Plants with large, buoyant seeds-like coconuts-drift on ocean currents and are washed up on the shores. Remarkably resistant to the vicissitudes of ocean travel, they can survive prolonged immersion in saltwater. When they come to rest on warm beaches and the conditions are favorable, the seed coats softer. Nourished by their imported supply of nutrients, the young plants push out their roots and establish their place in the sun.

By means of these seeds, plants spread more widely to new locations, even to isolated islands like the Hawaiian archipelago, which lies more than 2,000 miles west of California and 3,500 miles east of Japan. The seeds of grasses, flowers, and blooming trees made the long trips to these islands. (Grasses are simple forms of

angiosperms that bear their encapsulated seeds on long stalks.) In a surprisingly short time, angiosperms filed many of the land areas on Hawaii that had been bare.

Paragraph 2: Spores light enough to float on the breezes were carried thousands of miles from more ancient lands and deposited at random across the bare mountain flanks. A few of these spores found a toehold on the dark, forbidding rocks and grew and began to work their transformation upon the land. Lichens were probably the first successful flora. These are not single individual plants; each one is a symbiotic combination of an alga and a fungus. The algae capture the Sun's energy by photosynthesis and store it in organic molecules. The fungi absorb moisture and mineral salts from the rocks, passing these on in waste products that nourish algae. It is significant that the earliest living things that built communities on these islands are examples of symbiosis, a phenomenon that depends upon the close cooperation of two or more forms of life and a principle that is very important in island communities.

1. The phrase at random in the passage is closest in meaning to

○finally

○over a long period of time

○successfully

○without a definite pattern

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2. It can be inferred from paragraph 2 that the fungi in lichens benefit from their symbiotic relationship with algae in what way?

○The algae help the fungi meet some of their energy needs.

○The algae protect the fungi from the Sun's radiation.

○The algae provide the fungi with greater space for absorbing water.

○The fungi produce less waste in the presence of algae.

3. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○Some of the earliest important examples of symbiosis-the close cooperation of two or more living things-occur in island communities.

○Symbiosis-the close cooperation of pairs or small groups of living organisms-is especially important in these island environments.

○The first organisms on these islands worked together closely in a relationship known as symbiosis, which is particularly important on islands.

○It is significant to note that organisms in the beginning stages of the development of island life cannot survive without close cooperation.

Paragraph 3: Lichens helped to speed the decomposition of the hard rock surfaces, preparing a soft bed of soil that was abundantly supplied with minerals that had been carried in the molten rock from the bowels of Earth. Now, other

forms of life could take hold: ferns and mosses (two of the most ancient types of land plants) that flourish even in rock crevices. These plants propagate by producing spores-tiny fertilized cells that contain all the instructions for making a new plant-but the spores are unprotected by any outer coating and carry no supply of nutrient. Vast numbers of them fall on the ground beneath the mother plants. Sometimes they are carried farther afield by water or by wind. But only those few spores that settle down in very favorable locations can start new life; the vast majority fall on barren ground. By force of sheer numbers, however, the mosses and ferns reached Hawaii, survived, and multiplied. Some species developed great size, becoming tree ferns that even now grow in the Hawaiian forests.

4. The word abundantly in the passage is closest in meaning to

- ○occasionally
- ○plentifully
- ○usefully
- ○fortunately

5. The word propagate in the passage is closest in meaning to

- ○multiply
- ○emerge
- ○live
- ○evolve

6. According to paragraph 3, what was the relationship between lichens and ferns in the development of plant life on Hawaii?

○Ferns were able to grow because lichens created suitable soil.

○The decomposition of ferns produced minerals that were used by lichens.

○Lichens and ferns competed to grow in the same rocky environments.

○Lichens and ferns were typically found together in volcanic areas.

Paragraph 4 Many millions of years after ferns evolved (but long before the Hawaiian Island were born from the sea), another kind of flora evolved on Earth: the seed-bearing plants. This was a wonderful biological invention. The seed has an outer coating that surrounds the genetic material of the new plant, and inside this covering is a concentrated supply of nutrients. Thus, the speed's chances of survival are greatly enhanced over those of the naked spore. One type of seed-bearing plant, the angiosperm, includes all forms of blooming vegetation. In the angiosperm the seeds are wrapped in an additional layer of covering. Some of these coats are hard-like the shell of a nut-for extra protection. Some are soft and tempting, like a peach or a cherry. In some angiosperm the seeds are equipped with gossamer wings, like the dandelion and milkweed seeds. These new characteristics offered better ways for the seeds to move to new habitats. They could travel through the air, float in water, and lie dormant for many months.

7. The word This in the passage refers to

○the spread of ferns and mosses in Hawaii

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○the creation of the Hawaiian Islands

○the evolution of ferns

○the development of plants that produce seeds

8. According to paragraph 4, why do seeds have a greater chance of survival than spores do? To receive credit, you must select TWO answer choices.

○Seeds need less water to grow into a mature plant than spores do.

○Seeds do not need to rely on outside sources of nutrients.

○Seeds are better protected from environmental dangers than spores are.

○Seeds are heavier than spores and are therefore more likely to take root and grow.

9. Why does the author mention a nut, a peach, and a cherry?

○To indicate that some seeds are less likely to survive than others

○To point out that many angiosperms can be eaten

○To provide examples of blooming plants

○To illustrate the variety of coverings among angiosperm seeds

10. The word dormant in the passage is closest in meaning to

○hidden

○inactive

○underground

○preserved

Paragraph 5: Plants with large, buoyant seeds-like coconuts-drift on ocean currents and are washed up on the shores. Remarkably resistant to the vicissitudes of ocean travel, they can survive prolonged immersion in saltwater. When they come to rest on warm beaches and the conditions are favorable, the seed coats softer. Nourished by their imported supply of nutrients, the young plants push out their roots and establish their place in the sun.

11. According to paragraph 5, a major reason that coconuts can establish themselves in distant locations is that their seeds can

○survive long exposure to heat on island beaches

○float and survive for long periods in ocean water

○use saltwater for maintenance and growth

○maintain hard, protective coats even after growing roots

12. According to the passage, which of the following characteristics do spores and seeds have in common?

○They may be surrounded by several layers of covering

○They are produced by flowering plants.

○They may be spread by wind.

○They are able to grow in barren soils.

Paragraph 3 Lichens helped to speed the decomposition of the hard rock

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surfaces, preparing a soft bed of soil that was abundantly supplied with minerals that had been carried in the molten rock from the bowels of Earth. Now, other forms of life could take hold: ferns and mosses (two of the most ancient types of land plants) that flourish even in rock crevices. ■These plants propagate by producing spores-tiny fertilized cells that contain all the instructions for making a new plant-but the spores are unprotected by any outer coating and carry no supply of nutrient. ■Vast numbers of them fall on the ground beneath the mother plants. ■ Sometimes they are carried farther afield by water or by wind. ■But only those few spores that settle down in very favorable locations can start new life; the vast majority fall on barren ground. By force of sheer numbers, however, the mosses and ferns reached Hawaii, survived, and multiplied. Some species developed great size, becoming tree ferns that even now grow in the Hawaiian forests.

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

So since the chances of survival for any individual spore are small, the plants have to produce many spores in order to propagate.

Where could the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some answer choices do not belong in the summary because they express ideas that are not presented in the

passage or are minor ideas in the passage. This question is worth 2 points.

After the formation of the Hawaiian Islands, much time passed before conditions were suitable for plant life.

●

●

●

Answers Choices

○Algae are classified as symbiotic because they produce energy through the process of photosynthesis.

○The first successful plants on Hawaii were probably lichens, which consist of algae and fungi living in a symbiotic relationship.

○Lichens helped create favorable conditions for the growth of spore-producing plants such as ferns and mosses.

○Seed-bearing plants evolved much later than spore-producing plants, but both types of plants had evolved well before the formation of the Hawaiian Islands.

○Unlike spores, seeds must move to new habitats in order to have a strong chance of survival and growth.

○Seed-bearing plants arrived and spread quickly in Hawaii, thanks to characteristics that increased their seeds' ability to survive and to move to different areas.

参考答案：

1. ○4

2. ○1

3. ○3

4. ○2

5. ○1

6. ○1

7. ○4

8. ○2, 3

9. ○4

10. ○2

11. ○2

12. ○3

13. ○2

14. ○2, 3, 6

参考译文

夏威夷植物的到来

大约五百万年以前，当夏威夷群岛作为火山在从海洋中出现的时候，他们与其他大陆相距甚远。然后，经过了炙热阳光和湿润雨水的交替作用之后，那荒芜的黑色的岩石表面开始渐渐的变软。最后，大风就携带来了各种各样的生命。

孢子很轻，可以被微风携带着从更古老的陆地飘过几千英里并随机的降落在荒芜的山腰上。一些孢子在漆黑坚硬的岩石中找到了立足点，并生长起来，开始了它们向整个陆地蔓延的工作。地衣可能就是第一批成功安家的植物，它们不是单一的一种植物，每一个都是海藻和真菌的共生体。海藻通过光合作用获取太阳的能量，并将它储存在有机的分子中。真菌从岩石中吸收水分和矿物盐，并将这些作为代谢废物为海藻施肥。岛屿上的最早的生物群落以共生的方式存在是非常重要的。共生是一种依靠两种或两种以上的生物紧密合作而生存的现象，也是岛屿上生物群落非常重要的一项原则。

地衣有利于加速坚硬的岩石表面的分解，并产生了一层柔软的土壤，这些土壤可以提供熔融岩石含有的来自地球内部的丰富的矿物质。现在其他形式的生命就可以安家了：蕨类植物和苔藓（两种最古老的陆地植物品种）甚至可以在岩石缝隙里繁衍。这些植物通过产生孢子来繁殖，孢子是一些有营养的细胞，它们携带了所有的用于生长一株新的植物的遗传物质，

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但是它没有任何外部表皮的保护，也没携带供应营养的组织。大量的包子降落在母体植物下面的土地上，有时候它们被流水和风力带到了更远的地方。但是只有那些停驻在绝好的地方的孢子可以开始新的生命，绝大部分的孢子会落在不含矿物的岩层上。占着绝对数量上的优势，蕨类植物和地衣到达了夏威夷群岛存活下来，并繁衍开去。其中一些物种体型巨大，成为橛子树，它们甚至现在还生长在夏威夷的森林中。

在蕨类植物进化了好几百万年之后（不过，还是远在夏威夷群岛出现之前）另一种植物开始在地球上进化：种子植物。这是一次惊人的生物进化，种子有一层裹在遗传物质外面的表皮，在表皮里面是一种浓缩了的营养供给组织。因此，物种的成活率相对于那些裸露的孢子大大的提高了。其中一种种子植物——被子植物，包含了所有开花植物。在被子植物中，种子被另外的一层外皮包裹着。其中的一些表皮很坚硬—就像坚果的外壳—可以提供额外的保护。有一些则很软、诱人，比如桃子或樱桃。还有一些被子植物的种子携带有薄纱一样的翅膀，比如说蒲公英和马利筋的种子。这种特征为种子转移到新的栖息地提供了更好的途径，它们可以通过空气、流水传播并可以保存好几个月。

一些拥有硕大的、可以浮于水面的种子的植物，像椰子，随洋流飘荡，被冲上海岸。对洋流变动抵抗的耐久性使得他们可以在海水的长期浸泡中生存下来。当他们停歇在温暖的海滩上，一旦条件合适，种子的外皮就开始变软。由于受到内部携带的营养物质的滋养，幼小的植物伸长出他们的根部，并开始在阳光下成长。

借助这些种子，植物传播到更远的地方，甚至是像夏威夷群岛这样的孤立的群岛上。夏威夷群岛位于加利福利亚以西 2000 英里和日本以东 3500 英里。草，花和树木的种子经过长途跋涉到达那些岛屿上（草类是一类将其种子孕育在长长的秸秆中的被子植物）。在短得惊人的时间内，被子植物覆盖了夏威夷群岛上的很大的一部分荒芜地面。

FEEDING HABITS OF EAST AFRICAN HERBIVORES

Buffalo, zebras, wildebeests, topi, and Thomson's gazelles live in huge groups that together make up some 90 percent of the total weight of mammals living on the Serengeti Plain of East Africa. They are all herbivores (plant-eating animals), and they all appear to be living on the same diet of grasses, herbs, and small bushes. This appearance, however, is illusory. When biologist Richard Bell and his colleagues analyzed the stomach contents of four of the five species (they did not study buffalo), they found that each species was living on a different part of the vegetation. The different vegetational parts differ in their food qualities: lower down, there are succulent, nutritious leaves; higher up are the harder stems. There are also sparsely distributed, highly nutritious fruits, and Bell found that only the Thomson's gazelles eat much of these. The other three species differ in the proportion of lower leaves and higher stems that they eat: zebras eat the most stem matter, wildebeests eat the most leaves, and topi are intermediate.

How are we to understand their different feeding preferences? The answer lies in two associated differences among the species, in their digestive systems and body sizes. According to their digestive systems, these herbivores can be divided into two categories: the nonruminants (such as the zebra, which has a digestive system like a horse) and the ruminants (such as the wildebeest, topi, and gazelle, which are like the cow). Nonruminants cannot extract much energy from

the hard parts of a plant; however, this is more than made up for by the fast speed at which food passes through their guts. Thus, when there is only a short supply of poor-quality food, the wildebeest, topi, and gazelle enjoy an advantage. They are ruminants and have a special structure (the rumen) in their stomachs, which contains microorganisms that can break down the hard parts of plants. Food passes only slowly through the ruminant's gut because ruminating—digesting the hard parts—takes time. The ruminant continually regurgitates food from its stomach back to its mouth to chew it up further (that is what a cow is doing when "chewing cud"). Only when it has been chewed up and digested almost to a liquid can the food pass through the rumen and on through the gut. Larger particles cannot pass through until they have been chewed down to size. Therefore, when food is in short supply, a ruminant can last longer than a nonruminant because it can derive more energy out of the same food. The difference can partially explain the eating habits of the Serengeti herbivores. The zebra chooses areas where there is more low-quality food. It migrates first to unexploited areas and chomps the abundant low-quality stems before moving on. It is a fast-in/fast-out feeder, relying on a high output of incompletely digested food. By the time the wildebeests (and other ruminants) arrive, the grazing and trampling of the zebras will have worn the vegetation down. As the ruminants then set to work, they eat down to the lower, leafier parts of the vegetation. All of this fits in with the differences in stomach contents with which we began.

The other part of the explanation is body size. Larger animals require more

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food than smaller animals, but smaller animals have a higher metabolic rate. Smaller animals can therefore live where there is less food, provided that such food is of high energy content. That is why the smallest of the herbivores, Thomson's gazelle, lives on fruit that is very nutritious but too thin on the ground to support a larger animal. By contrast, the large zebra lives on the masses of low-quality stem material.

The differences in feeding preferences lead, in turn, to differences in migratory habits. The wildebeests follow, in their migration, the pattern of local rainfall. The other species do likewise. But when a new area is fueled by rain, the mammals migrate toward it in a set order to exploit it. The larger, less fastidious feeders, the zebras, move in first; the choosier, smaller wildebeests come later; and the smallest species of all, Thomson's gazelle, arrives last. The later species all depend on the preparations of the earlier one, for the actions of the zebra alter the vegetation to suit the stomachs of the wildebeest, topi, and gazelle.

Paragraph 1: Buffalo, zebras, wildebeests, topi, and Thomson's gazelles live in huge groups that together make up some 90 percent of the total weight of mammals living on the Serengeti Plain of East Africa. They are all herbivores (plant-eating animals), and they all appear to be living on the same diet of grasses, herbs, and small bushes. This appearance, however, is illusory. When biologist Richard Bell and his colleagues analyzed the stomach contents of four of the five

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species (they did not study buffalo), they found that each species was living on a different part of the vegetation. The different vegetational parts differ in their food qualities: lower down, there are succulent, nutritious leaves; higher up are the harder stems. There are also sparsely distributed, highly nutritious fruits, and Bell found that only the Thomson's gazelles eat much of these. The other three species differ in the proportion of lower leaves and higher stems that they eat: zebras eat the most stem matter, wildebeests eat the most leaves, and topi are intermediate.

1. The word illusory in the passage is closest in meaning to

- ○definite
- ○illuminating
- ○misleading
- ○exceptional

2. The word sparsely in the passage is closest in meaning to

- ○widely
- ○thinly
- ○clearly
- ○freshly

3. Which of the following questions about Richard Bell's research is NOT answered in paragraph 1?

- ○Which of the herbivores studied is the only one to eat much fruit?

- Which part of the plants do wildebeests prefer to eat?
- Where did the study of herbivores' eating habits take place?
- Why were buffalo excluded from the research study?

Paragraph 2: How are we to understand their different feeding preferences? The answer lies in two associated differences among the species, in their digestive systems and body sizes. According to their digestive systems, these herbivores can be divided into two categories: the nonruminants (such as the zebra, which has a digestive system like a horse) and the ruminants (such as the wildebeest, topi, and gazelle, which are like the cow). Nonruminants cannot extract much energy from the hard parts of a plant; however, this is more than made up for by the fast speed at which food passes through their guts. Thus, when there is only a short supply of poor-quality food, the wildebeest, topi, and gazelle enjoy an advantage. They are ruminants and have a special structure (the rumen) in their stomachs, which contains microorganisms that can break down the hard parts of plants. Food passes only slowly through the ruminant's gut because ruminating—digesting the hard parts—takes time. The ruminant continually regurgitates food from its stomach back to its mouth to chew it up further (that is what a cow is doing when "chewing cud"). Only when it has been chewed up and digested almost to a liquid can the food pass through the rumen and on through the gut. Larger particles cannot pass through until they have been chewed down to size. Therefore, when food is in short supply, a ruminant can last longer than a nonruminant because it can derive more energy out of the same food. The difference can partially explain

the eating habits of the Serengeti herbivores. The zebra chooses areas where there is more low-quality food. It migrates first to unexploited areas and chomps the abundant low-quality stems before moving on. It is a fast-in/fast-out feeder, relying on a high output of incompletely digested food. By the time the wildebeests (and other ruminants) arrive, the grazing and trampling of the zebras will have worn the vegetation down. As the ruminants then set to work, they eat down to the lower, leafier parts of the vegetation. All of this fits in with the differences in stomach contents with which we began.

4. The word associated in the passage is closest in meaning to

○obvious

○significant

○expected

○connected

5. The author mentions the cow and the horse in paragraph 2 in order to

○distinguish the functioning of their digestive systems from those of East African animals

○emphasize that their relatively large body size leads them to have feeding practices similar to those of East African mammals

○illustrate differences between ruminants and nonruminants through the use of animals likely to be familiar to most readers

○emphasize similarities between the diets of cows and horses and the diets

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of East African mammals

6. According to paragraph 2, which of the following herbivores has to eat large quantities of plant stems because it gains relatively little energy from each given quantity of this food?

○The gazelle

○The wildebeest

○ The zebra

○ The topi

7. Paragraph 2 suggests that which of the following is one of the most important factors in determining differences in feeding preferences of East African herbivores?

○The availability of certain foods

○The differences in stomach structure

○The physical nature of vegetation in the environment

○The ability to migrate when food supplies are low

8. According to paragraph 2, all of the following are true of East African gazelles EXCEPT:

○They digest their food very quickly.

○Microorganisms help them digest their food.

○They are unable to digest large food particles unless these are chewed

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down considerably.

○They survive well even if food supplies are not abundant.

Paragraph 3: The other part of the explanation is body size. Larger animals require more food than smaller animals, but smaller animals have a higher metabolic rate. Smaller animals can therefore live where there is less food, provided that such food is of high energy content. That is why the smallest of the herbivores, Thomson's gazelle, lives on fruit that is very nutritious but too thin on the ground to support a larger animal. By contrast, the large zebra lives on the masses of low-quality stem material.

9. The phrase provided that in the passage is closest in meaning to

○as long as

○unless

○as if

○even though

Paragraph 4: The differences in feeding preferences lead, in turn, to differences in migratory habits. The wildebeests follow, in their migration, the pattern of local rainfall. The other species do likewise. But when a new area is fueled by rain, the mammals migrate toward it in a set order to exploit it. The larger, less fastidious feeders, the zebras, move in first; the choosier, smaller wildebeests come later; and the smallest species of all, Thomson's gazelle, arrives

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last. The later species all depend on the preparations of the earlier one, for the actions of the zebra alter the vegetation to suit the stomachs of the wildebeest, topi, and gazelle.

10. The word fastidious in the passage is closest in meaning to

○rapid

○determined

○flexible

○demanding

11. According to paragraph 4, which of the following mammals exhibits a feeding behavior that is beneficial to the other herbivores that share the same habitat?

○Topi

○Zebra

○Wildebeest

○Gazelle

12. According to the passage, which of the following is true of wildebeests?

○They eat more stem matter than zebras do.

○They are able to digest large food particles if the food is of a high quality.

○They tend to choose feeding areas in which the vegetation has been worn down.

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○They are likely to choose low-quality food to eat in periods when the quantity of rainfall is low.

Paragraph 4: The differences in feeding preferences lead, in turn, to differences in migratory habits.■ The wildebeests follow, in their migration, the pattern of local rainfall. ■ The other species do likewise. ■ But when a new area is fueled by rain, the mammals migrate toward it in a set order to exploit it. ■ The larger, less fastidious feeders, the zebras, move in first; the choosier, smaller wildebeests come later; and the smallest species of all, Thomson's gazelle, arrives last. The later species all depend on the preparations of the earlier one, for the actions of the zebra alter the vegetation to suit the stomachs of the wildebeest, topi, and gazelle.

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

The sequence in which they migrate correlates with their body size.

Where would the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

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East African herbivores, though they all live in the same environment, have a range of feeding preferences.

●

●

●

Answer Choices

○The survival of East African mammals depends more than anything else on the quantity of highly nutritious fruits that they are able to find.

○A herbivore's size and metabolic rate affect the kinds of food and the quantities of food it needs to eat.

○Zebras and wildebeests rarely compete for the same food resources in the same locations.

○The different digestive systems of herbivores explain their feeding preferences.

○Migratory habits are influenced by feeding preferences.

○Patterns in the migratory habits of East African herbivores are hard to establish.

参考答案

1. ○3
2. ○2
3. ○4
4. ○4
5. ○3
6. ○3
7. ○2
8. ○1
9. ○1
10. ○4
11. ○2
12. ○3
13. ○4
14. ○2, 4, 5

参考译文

东非草食动物的饮食

野牛，斑马，角马，转角牛羚和汤氏羚这些群居动物占据了非洲东部塞伦盖蒂平原的总哺乳动物的数量的 90%。它们都是草食动物（以吃植物为生的动物），并且看似有着相同的日常饮食：草，香草，和小的灌木。不过，这个现象是假的。在生物学家 Richard Bell 和他的同僚分析 5 种物种其中的 4 个（他们没有研究野牛）的胃内含量时，他们发现其实每个物种所食用的植物部位是不同的。这些不一样的植物部分是区分于它们的食物质量：下部的是多汁又营养的树叶；上面的部分则是更坚硬的茎杆。Bell 还在汤氏羚的胃里发现了一些分布稀少的高营养含量的水果，不过只有汤氏羚吃这些。其他三个物种是因为所食用的低树叶和高的茎杆的比例不同而区别的：斑马主要吃茎杆部分，角马主要吃树叶，转角牛羚则一半一半。

那么我们怎样来理解他们这些不同的食物选择呢？答案就在所有物种的两个相互关联的差异：他们的消化系统和体型大小。这些草食动物可根据他们的消化系统而分为两类：非反刍动物（比如说有着和马类似消化系统的斑马）和反刍动物（比如角马，转角牛羚，和小羚羊，他们的则和奶牛的相似）。非反刍动物并不能够从植物的坚硬部分提取出很多能量；不管怎样，能有这些能量已经不错了，因为这些是相对于食物是以一个非常快的速度进入肠胃的情况产生的。因此，当只有供应不足的质量低劣的食物时，角马，转角牛羚和小羚羊享有了优势。因为他们是反刍动物，而反刍

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动物的胃部含有能够分解食物坚硬部分的微生物的特殊结构（瘤胃）。食物只很慢的在反刍动物的肠胃里传递，因为反刍的过程—消化坚硬的部分—需要一定时间。反刍动物不断地将胃里的食物返回嘴里继续咀嚼（这就是奶牛在“反刍”时所做的）。只有当食物在经过咀嚼和消化的过程变成近似液体的时候，它才可能通过瘤胃并进入和通过肠胃。比较大的颗粒在被咀嚼成小块之前，是不能通过的。所以，当食物供不应求时，一个反刍动物可以比一个非反刍动物活的时间更长，因为它能从同样的食物中提取到更多的能量。这个差异部分的解释了塞伦盖蒂草食动物的饮食习惯。斑马选择的是有更多低质量食物的区域。它首先迁移到未被开垦的区域，并在继续迁移前，食用掉当地充足的低质量食物。斑马是一个新陈代谢很快的进食者，这一结论依据于它们的大量的排泄物都是那些没有被完全消化的食物。当角马（或其他反刍动物）到来时，斑马的牧草和踩踏已经把当地的植被进行耗损筛选了。所以当这些反刍动物开始行动时，它们吃的是植物较矮的叶状的部分。所有这些答案都符合了我们最开始提到的胃含量的差异。

另一方面的解释则是体型的大小。体型较大的动物相对于较小的需要更多的食物，而小型动物具有更高的代谢率。所以更小的动物可以居住在有少量食物的地方，如果这种食物是具有高能量的话。这就是为什么，具有最小体型的汤氏羚，可以以水果这样一个很有营养，但是对于支撑大型动物来说过于单薄的食物生存下去。相反，大斑马是居住在具有大量低质量茎杆的地方。

依次下来，食物选择的差异进而造成了迁移习性的不同。角马的迁移遵循的是当地的降雨类型。其他物种的做法也与其相似。但当一个新的地点被发现降水量充足时，哺乳动物以一定的先后顺序向此地迁徙的。较大的，不那么挑剔的进食者斑马最先移入；比较挑剔的稍小的角马第二个；汤氏羚，作为这些当中最小的物种，则是最后。就像斑马给角马，转角牛羚和汤氏羚的食物进行了筛选一样，后进来的物种是要依赖于前面物种给它们所做的准备的。

LOIE FULLER

The United States dancer Loie Fuller (1862–1928) found theatrical dance in the late nineteenth century artistically unfulfilling. She considered herself an artist rather than a mere entertainer, and she, in turn, attracted the notice of other artists.

Fuller devised a type of dance that focused on the shifting play of lights and colors on the voluminous skirts or draperies she wore, which she kept in constant motion principally through movements of her arms, sometimes extended with wands concealed under her costumes. She rejected the technical virtuosity of movement in ballet, the most prestigious form of theatrical dance at that time, perhaps because her formal dance training was minimal. Although her early theatrical career had included stints as an actress, she was not primarily interested in storytelling or expressing emotions through dance; the drama of her dancing emanated from her visual effects.

Although she discovered and introduced her art in the United States, she achieved her greatest glory in Paris, where she was engaged by the Folies Bergère in 1892 and soon became “La Loie,” the darling of Parisian audiences. Many of her dances represented elements or natural objects—Fire, the Lily, the Butterfly, and so on—and thus accorded well with the fashionable Art Nouveau style, which emphasized nature imagery and fluid, sinuous lines. Her dancing also attracted the

attention of French poets and painters of the period, for it appealed to their liking for mystery, their belief in art for art's sake, a nineteenth-century idea that art is valuable in itself rather than because it may have some moral or educational benefit, and their efforts to synthesize form and content.

Fuller had scientific leanings and constantly experimented with electrical lighting (which was then in its infancy), colored gels, slide projections, and other aspects of stage technology. She invented and patented special arrangements of mirrors and concocted chemical dyes for her draperies. Her interest in color and light paralleled the research of several artists of the period, notably the painter Seurat, famed for his Pointillist technique of creating a sense of shapes and light on canvas by applying extremely small dots of color rather than by painting lines. One of Fuller's major inventions was underlighting, in which she stood on a pane of frosted glass illuminated from underneath. This was particularly effective in her Fire Dance (1895), performed to the music of Richard Wagner's "Ride of the Valkyries." The dance caught the eye of artist Henri de Toulouse-Lautrec, who depicted it in a lithograph.

As her technological expertise grew more sophisticated, so did the other aspects of her dances. Although she gave little thought to music in her earliest dances, she later used scores by Gluck, Beethoven, Schubert, Chopin, and Wagner, eventually graduating to Stravinsky, Fauré, Debussy, and Mussorgsky, composers who were then considered progressive. She began to address more ambitious

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themes in her dances such as The Sea, in which her dancers invisibly agitated a huge expanse of silk, played upon by colored lights. Always open to scientific and technological innovations, she befriended the scientists Marie and Pierre Curie upon their discovery of radium and created a Radium Dance, which simulated the phosphorescence of that element. She both appeared in films—then in an early stage of development—and made them herself; the hero of her fairy-tale film Le Lys de la Vie (1919) was played by René Clair, later a leading French film director.

At the Paris Exposition in 1900, she had her own theater, where, in addition to her own dances, she presented pantomimes by the Japanese actress Sada Yocco. She assembled an all-female company at this time and established a school around 1908, but neither survived her. Although she is remembered today chiefly for her innovations in stage lighting, her activities also touched Isadora Duncan and Ruth St. Denis, two other United States dancers who were experimenting with new types of dance. She sponsored Duncan's first appearance in Europe. Her theater at the Paris Exposition was visited by St. Denis, who found new ideas about stagecraft in Fuller's work and fresh sources for her art in Sada Yocco's plays. In 1924 St. Denis paid tribute to Fuller with the duet Valse à la Loie.

Paragraph 1: The United States dancer Loie Fuller (1862–1928) found theatrical dance in the late nineteenth century artistically unfulfilling. She considered herself an artist rather than a mere entertainer, and she, in turn,

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attracted the notice of other artists.

1. What can be inferred from paragraph 1 about theatrical dance in the late nineteenth century?

○It influenced many artists outside of the field of dance.

○It was very similar to theatrical dance of the early nineteenth century.

○It was more a form of entertainment than a form of serious art.

○It was a relatively new art form in the United States.

Paragraph 2: Fuller devised a type of dance that focused on the shifting play of lights and colors on the voluminous skirts or draperies she wore, which she kept in constant motion principally through movements of her arms, sometimes extended with wands concealed under her costumes. She rejected the technical virtuosity of movement in ballet, the most prestigious form of theatrical dance at that time, perhaps because her formal dance training was minimal. Although her early theatrical career had included stints as an actress, she was not primarily interested in storytelling or expressing emotions through dance; the drama of her dancing emanated from her visual effects.

2. According to paragraph 2, all of the following are characteristic of Fuller's type of dance EXCEPT

○experimentation using color

○large and full costumes

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○continuous movement of her costumes

○ technical virtuosity of movement

3. The word prestigious in the passage is closest in meaning to

○highly regarded

○financially rewarding

○demanding

○serious

4. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○Fuller was more interested in dance's visual impact than in its narrative or emotional possibilities.

○Fuller used visual effects to dramatize the stories and emotions expressed in her work.

○Fuller believed that the drama of her dancing sprang from her emotional style of storytelling.

○Fuller's focus on the visual effects of dance resulted from her early theatrical training as an actress.

Paragraph 3: Although she discovered and introduced her art in the United States, she achieved her greatest glory in Paris, where she was engaged by the

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Folies Bergère in 1892 and soon became “La Loie,” the darling of Parisian audiences. Many of her dances represented elements or natural objects—Fire, the Lily, the Butterfly, and so on—and thus accorded well with the fashionable Art Nouveau style, which emphasized nature imagery and fluid, sinuous lines. Her dancing also attracted the attention of French poets and painters of the period, for it appealed to their liking for mystery, their belief in art for art’s sake, a nineteenth-century idea that art is valuable in itself rather than because it may have some moral or educational benefit, and their efforts to synthesize form and content.

5. The word engaged in the passage is closest in meaning to

- ○noticed
- ○praised
- ○hired
- ○attracted

6. The word synthesize in the passage is closest in meaning to

- ○improve
- ○define
- ○simplify
- ○integrate

7. According to paragraph 3, why was Fuller’s work well received in Paris?

○Parisian audiences were particularly interested in artists and artistic movements from the United States.

○Influential poets tried to interest dancers in Fuller's work when she arrived in Paris.

○Fuller's work at this time borrowed directly from French artists working in other media.

○Fuller's dances were in harmony with the artistic values already present in Paris.

Paragraph 4: Fuller had scientific leanings and constantly experimented with electrical lighting (which was then in its infancy), colored gels, slide projections, and other aspects of stage technology. She invented and patented special arrangements of mirrors and concocted chemical dyes for her draperies. Her interest in color and light paralleled the research of several artists of the period, notably the painter Seurat, famed for his Pointillist technique of creating a sense of shapes and light on canvas by applying extremely small dots of color rather than by painting lines. One of Fuller's major inventions was underlighting, in which she stood on a pane of frosted glass illuminated from underneath. This was particularly effective in her Fire Dance (1895), performed to the music of Richard Wagner's "Ride of the Valkyries." The dance caught the eye of artist Henri de Toulouse-Lautrec, who depicted it in a lithograph.

8. According to paragraph 4, Fuller's Fire Dance was notable in part for its

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○use of colored gels to illuminate glass

○use of dyes and paints to create an image of fire

○technique of lighting the dancer from beneath

○draperies with small dots resembling the Pointillist technique of Seurat

Paragraph 5: As her technological expertise grew more sophisticated, so did the other aspects of her dances. Although she gave little thought to music in her earliest dances, she later used scores by Gluck, Beethoven, Schubert, Chopin, and Wagner, eventually graduating to Stravinsky, Fauré, Debussy, and Mussorgsky, composers who were then considered progressive. She began to address more ambitious themes in her dances such as The Sea, in which her dancers invisibly agitated a huge expanse of silk, played upon by colored lights. Always open to scientific and technological innovations, she befriended the scientists Marie and Pierre Curie upon their discovery of radium and created a Radium Dance, which simulated the phosphorescence of that element. She both appeared in films—then in an early stage of development—and made them herself; the hero of her fairy-tale film Le Lys de la Vie (1919) was played by René Clair, later a leading French film director.

9. Why does the author mention Fuller's The Sea?

○To point out a dance of Fuller's in which music did not play an important role

○ To explain why Fuller sometimes used music by progressive composers

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○To illustrate a particular way in which Fuller developed as an artist

○To illustrate how Fuller's interest in science was reflected in her work

10. The word agitated in the passage is closest in meaning to

○emerged from beneath

○created movement in

○arranged themselves in

○pretended to be

Paragraph 6: At the Paris Exposition in 1900, she had her own theater, where, in addition to her own dances, she presented pantomimes by the Japanese actress Sada Yocco. She assembled an all-female company at this time and established a school around 1908, but neither survived her. Although she is remembered today chiefly for her innovations in stage lighting, her activities also touched Isadora Duncan and Ruth St. Denis, two other United States dancers who were experimenting with new types of dance. She sponsored Duncan's first appearance in Europe. Her theater at the Paris Exposition was visited by St. Denis, who found new ideas about stagecraft in Fuller's work and fresh sources for her art in Sada Yocco's plays. In 1924 St. Denis paid tribute to Fuller with the duet Valse à la Loie.

11. According to paragraph 6, what was true of Fuller's theater at the Paris Exposition?

○It presented some works that were not by Fuller.

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○It featured performances by prominent male as well as female dancers.

○It became a famous school that is still named in honor of Fuller.

○It continued to operate as a theater after Fuller died.

12. The passage mentions which of the following as a dance of Fuller's that was set to music?

○Fire Dance

○Radium Dance

○Le Lys de la Vie

○Valse à la Loie

Paragraph 5: As her technological expertise grew more sophisticated, so did the other aspects of her dances. ■ Although she gave little thought to music in her earliest dances, she later used scores by Gluck, Beethoven, Schubert, Chopin, and Wagner, eventually graduating to Stravinsky, Fauré, Debussy, and Mussorgsky, composers who were then considered progressive. ■ She began to address more ambitious themes in her dances such as The Sea, in which her dancers invisibly agitated a huge expanse of silk, played upon by colored lights. ■ Always open to scientific and technological innovations, she befriended the scientists Marie and Pierre Curie upon their discovery of radium and created a Radium Dance, which simulated the phosphorescence of that element. ■ She both appeared in films—then in an early stage of development—and made them herself; the hero of her fairy-tale film Le Lys de la Vie (1919) was played by René Clair, later a leading

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French film director.

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

For all her originality in dance, her interests expanded beyond it into newly emerging artistic media.

Where would the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

Loie Fuller was an important and innovative dancer.

●

●

●

Answer Choices

○Fuller believed that audiences in the late nineteenth century had lost interest in most theatrical dance.

○ Fuller transformed dance in part by creating dance interpretations of works

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by poets and painters.

○ Fuller's work influenced a number of other dancers who were interested in experimental dance.

○ Fuller introduced many technical innovations to the staging of theatrical dance.

○ Fuller continued to develop throughout her career, creating more complex works and exploring new artistic media.

○ By the 1920's, Fuller's theater at the Paris Exhibition had become the world center for innovative dance.

参考答案:

1. ○3
2. ○4
3. ○1
4. ○1
5. ○3
6. ○4
7. ○4
8. ○3
9. ○3
10. ○2
11. ○1
12. ○1
13. ○4
14. ○3, 4, 5

参考译文

Loie Fuller

Loie Fuller(1862-1928)作为一位美国的舞者，认为 19 世纪末的舞台式舞蹈缺乏艺术性。她把她自己定义为一位艺术家而不仅仅演艺人员，随之下来，她也得到了其他艺术家的关注。

Fuller 设计了一种注重灯光变换和她所穿的大体积的裙子或布料的颜色的舞蹈，所以她的舞姿则主要体现在上肢动作，而有些时候她的服装的体积是需要用隐藏在下面的棍状物体来填充实现的。她没有采用在当时的舞台式舞蹈上声望很高的高技术含量的芭蕾动作，原因可能是她所接受的正式舞蹈培训太少了。虽然在她早期的舞台事业里体现了作为一名艺术家的一些约束,她的主要精力并没有放在通过舞蹈来传递故事或感情上，而是通过视觉效应散发出她舞蹈的戏剧性。

尽管她是在美国找到并呈现了她的艺术，她最大的成就在巴黎，在 1892 年她被 Folies Bergere（一个巴黎剧院）所雇佣,而不久变成“La Loie”----巴黎观众的宠儿。因为她的很多舞蹈作品例如火，百合花，蝴蝶等等代表的都是一些元素或自然物体，所以它们与注重自然风景和流畅弯曲线条的时尚 Art Nouveau 的风格是一致的。她的舞蹈还吸引了当时法国的诗人和画家的注意，因为它符合他们对神秘色彩的喜好，他们对于艺术只为艺术产生的信仰----19 世纪艺术被认为它的本身比它所带来的道德或教育利益更有价值，和他们对外形和内容的合成所做的研究努力。

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Fuller 本人倾向于科学，所以经常试用电气灯光（电灯在那个时候才刚刚面市），染色胶，投影片，和其他方面的舞台技术。她对色彩和灯光的研究与当时几位艺术家相应，特别是在画布上以描绘极其细微的点来创造形状和光泽，而不是用线条的而著名的点彩派画家 Seurat。Fuller 主要的发明之一是地面照明，意思是她站在一块毛玻璃上，而光是从下面照射上来的。这个发明尤其在她以 Richard Wagner 的“Ride of the Valkyries”作为背景音乐的作品火（1895）中起到了很大作用。这个舞蹈吸引了艺术家 Henri de Toulouse-Lautrec 的眼球，他把它在石版画中描绘了出来。

随着她的工艺技术变得更加成熟，也带动了她的舞蹈的其他方面。尽管在她在早期舞蹈作品中，没有花太多心思在音乐上，但随后她使用了 Gluck, Beethoven, Schubert, Chopin,和 Wagner 的乐曲，最后则变成了采用在当时被认为进步的一些作曲家的曲子，像 Stravinsky, Fauré, Debussy, 和 Mussorgsky。她开始强调更有野心的主题，比如作品大海，在这个作品中舞者们在色光灯所创造的辽阔的隐形丝绸下摇摆。因为 Fuller 总是对科技创新抱有很开放的态度，她与科学家 Marie 和 Pierre Curie 在镭的研究中成为了朋友，并创造出了作品镭来模仿该元素的磷光。她也踏足了电影业----那个时候还处于早期发展中----她的电影都是自己制作拍摄的；在她的童话电影 Le Lys de la Vie (1919)中饰演英雄角色的，是后来一名知名法国电影导演 René Clair。

在 1990 年的巴黎展览会上，她得到了一个独立剧场，在那里，除了她

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自己的舞蹈，她还呈现了日本女演员 Sada Yocco 的哑剧。1908 年左右，她成立了一个女子公司并建立了一所学校，但是哪个都没有成功。尽管她主要是被她所带来的舞台灯光革新所为人们熟知的，但她的事迹也与 Isadora Duncan 和 Ruth St. Denis，这两个当时尝试新型舞蹈的舞者有关。她赞助了 Duncan 在欧洲的首次亮相。St. Denis 拜访了她在巴黎展览会的博物馆，他分别为 Fuller 的作品和她在 Sada Yocco 剧本的艺术作为找到了新的编剧想法和鲜活的来源。1924 年，St. Denis 对 Fuller 的双人表演 Valse à la Loie 表达了赞赏。

GREEN ICEBERGS

Icebergs are massive blocks of ice, irregular in shape; they float with only about 12 percent of their mass above the sea surface. They are formed by glaciers—large rivers of ice that begin inland in the snows of Greenland, Antarctica, and Alaska—and move slowly toward the sea. The forward movement, the melting at the base of the glacier where it meets the ocean, and waves and tidal action cause blocks of ice to break off and float out to sea.

Icebergs are ordinarily blue to white, although they sometimes appear dark or opaque because they carry gravel and bits of rock. They may change color with changing light conditions and cloud cover, glowing pink or gold in the morning or evening light, but this color change is generally related to the low angle of the Sun above the horizon. However, travelers to Antarctica have repeatedly reported seeing green icebergs in the Weddell Sea and, more commonly, close to the Amery Ice Shelf in East Antarctica.

One explanation for green icebergs attributes their color to an optical illusion when blue ice is illuminated by a near-horizon red Sun, but green icebergs stand out among white and blue icebergs under a great variety of light conditions. Another suggestion is that the color might be related to ice with high levels of metallic compounds, including copper and iron. Recent expeditions have taken ice samples from green icebergs and ice cores—vertical, cylindrical ice samples

reaching down to great depths—from the glacial ice shelves along the Antarctic continent. Analyses of these cores and samples provide a different solution to the problem.

The ice shelf cores, with a total length of 215 meters (705 feet), were long enough to penetrate through glacial ice—which is formed from the compaction of snow and contains air bubbles—and to continue into the clear, bubble-free ice formed from seawater that freezes onto the bottom of the glacial ice. The properties of this clear sea ice were very similar to the ice from the green iceberg. The scientists concluded that green icebergs form when a two-layer block of shelf ice breaks away and capsizes (turns upside down), exposing the bubble-free shelf ice that was formed from seawater.

A green iceberg that stranded just west of the Amery Ice Shelf showed two distinct layers: bubbly blue-white ice and bubble-free green ice separated by a one-meter- long ice layer containing sediments. The green ice portion was textured by seawater erosion. Where cracks were present, the color was light green because of light scattering; where no cracks were present, the color was dark green. No air bubbles were present in the green ice, suggesting that the ice was not formed from the compression of snow but instead from the freezing of seawater. Large concentrations of single-celled organisms with green pigments (coloring substances) occur along the edges of the ice shelves in this region, and the seawater is rich in their decomposing organic material. The green iceberg did not

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contain large amounts of particles from these organisms, but the ice had accumulated dissolved organic matter from the seawater. It appears that unlike salt, dissolved organic substances are not excluded from the ice in the freezing process. Analysis shows that the dissolved organic material absorbs enough blue wavelengths from solar light to make the ice appear green.

Chemical evidence shows that platelets (minute flat portions) of ice form in the water and then accrete and stick to the bottom of the ice shelf to form a slush (partially melted snow). The slush is compacted by an unknown mechanism, and solid, bubblefree ice is formed from water high in soluble organic substances. When an iceberg separates from the ice shelf and capsizes, the green ice is exposed.

The Amery Ice Shelf appears to be uniquely suited to the production of green icebergs. Once detached from the ice shelf, these bergs drift in the currents and wind systems surrounding Antarctica and can be found scattered among Antarctica's less colorful icebergs.

Paragraph 1: Icebergs are massive blocks of ice, irregular in shape; they float with only about 12 percent of their mass above the sea surface. They are formed by glaciers—large rivers of ice that begin inland in the snows of Greenland, Antarctica, and Alaska—and move slowly toward the sea. The forward movement, the melting

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at the base of the glacier where it meets the ocean, and waves and tidal action cause blocks of ice to break off and float out to sea.

1. According to paragraph 1, all of the following are true of icebergs EXCEPT:

○They do not have a regular shape.

○They are formed where glaciers meet the ocean.

○Most of their mass is above the sea surface.

○Waves and tides cause them to break off glaciers.

Paragraph 2: Icebergs are ordinarily blue to white, although they sometimes appear dark or opaque because they carry gravel and bits of rock. They may change color with changing light conditions and cloud cover, glowing pink or gold in the morning or evening light, but this color change is generally related to the low angle of the Sun above the horizon. However, travelers to Antarctica have repeatedly reported seeing green icebergs in the Weddell Sea and, more commonly, close to the Amery Ice Shelf in East Antarctica.

2. According to paragraph 2, what causes icebergs to sometimes appear dark or opaque?

○A heavy cloud cover

○The presence of gravel or bits of rock

○The low angle of the Sun above the horizon

○The presence of large cracks in their surface

Paragraph 2: One explanation for green icebergs attributes their color to an optical illusion when blue ice is illuminated by a near-horizon red Sun, but green icebergs stand out among white and blue icebergs under a great variety of light conditions. Another suggestion is that the color might be related to ice with high levels of metallic compounds, including copper and iron. Recent expeditions have taken ice samples from green icebergs and ice cores—vertical, cylindrical ice samples reaching down to great depths—from the glacial ice shelves along the Antarctic continent. Analyses of these cores and samples provide a different solution to the problem.

3. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○One explanation notes that green icebergs stand out among other icebergs under a great variety of light conditions, but this is attributed to an optical illusion.

○One explanation for the color of green icebergs attributes their color to an optical illusion that occurs when the light from a near-horizon red Sun shines on a blue iceberg.

○One explanation for green icebergs attributes their color to a great variety of light conditions, but green icebergs stand out best among other icebergs when

illuminated by a near-horizon red Sun.

○One explanation attributes the color of green icebergs to an optical illusion under special light conditions, but green icebergs appear distinct from other icebergs under a great variety of light conditions.

Paragraph 4: The ice shelf cores, with a total length of 215 meters (705 feet), were long enough to penetrate through glacial ice—which is formed from the compaction of snow and contains air bubbles—and to continue into the clear, bubble-free ice formed from seawater that freezes onto the bottom of the glacial ice. The properties of this clear sea ice were very similar to the ice from the green iceberg. The scientists concluded that green icebergs form when a two-layer block of shelf ice breaks away and capsizes (turns upside down), exposing the bubble-free shelf ice that was formed from seawater.

4. The word penetrate in the passage is closest in meaning to

○collect

○pierce

○melt

○endure

5. According to paragraph 4, how is glacial ice formed?

○By the compaction of snow

○By the freezing of seawater on the bottom of ice shelves

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○By breaking away from the ice shelf

○By the capsizing of a two-layer block of shelf ice

6. According to paragraph 4, ice shelf cores helped scientists explain the formation of green icebergs by showing that

○the ice at the bottom of green icebergs is bubble-free ice formed from frozen seawater

○bubble-free ice is found at the top of the ice shelf

○glacial ice is lighter and floats better than sea ice

○the clear sea ice at the bottom of the ice shelf is similar to ice from a green iceberg

Paragraph 5: A green iceberg that stranded just west of the Amery Ice Shelf showed two distinct layers: bubbly blue-white ice and bubble-free green ice separated by a one-meter-long ice layer containing sediments. The green ice portion was textured by seawater erosion. Where cracks were present, the color was light green because of light scattering; where no cracks were present, the color was dark green. No air bubbles were present in the green ice, suggesting that the ice was not formed from the compression of snow but instead from the freezing of seawater. Large concentrations of single-celled organisms with green pigments (coloring substances) occur along the edges of the ice shelves in this region, and the seawater is rich in their decomposing organic material. The green iceberg did not contain large amounts of particles from these organisms, but the ice

had accumulated dissolved organic matter from the seawater. It appears that unlike salt, dissolved organic substances are not excluded from the ice in the freezing process. Analysis shows that the dissolved organic material absorbs enough blue wavelengths from solar light to make the ice appear green.

7. Why does the author mention that "The green ice portion was textured by seawater erosion"?

○To explain why cracks in the iceberg appeared light green instead of dark green

○To suggest that green ice is more easily eroded by seawater than white ice is

○To support the idea that the green ice had been the bottom layer before capsizing

○To explain how the air bubbles had been removed from the green ice

8. The word accumulated in the passage is closest in meaning to

○collected

○frozen

○released

○ covered

9. The word excluded in the passage is closest in meaning to

○kept out

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○ compressed

○damaged

○gathered together

Paragraph 6: Chemical evidence shows that platelets (minute flat portions) of ice form in the water and then accrete and stick to the bottom of the ice shelf to form a slush (partially melted snow). The slush is compacted by an unknown mechanism, and solid, bubble-free ice is formed from water high in soluble organic substances. When an iceberg separates from the ice shelf and capsizes, the green ice is exposed.

10. The word accrete in the passage is closest in meaning to

○advance

○transfer

○flatten out

○come together

11. Which of the following is NOT explained in the passage?

○Why blocks of ice break off where glaciers meet the ocean

○Why blocks of shelf ice sometimes capsize after breaking off

○Why green icebergs are commonly produced in some parts of Antarctica

○Why green icebergs contain large amounts of dissolved organic pigments

12. The passage supports which of the following statements about the Amery Ice Shelf?

○The Amery Ice Shelf produces only green icebergs.

○The Amery Ice Shelf produces green icebergs because its ice contains high levels of metallic compounds such as copper and iron.

○The Amery Ice Shelf produces green icebergs because the seawater is rich in a particular kind of soluble organic material.

○No green icebergs are found far from the Amery Ice Shelf.

Paragraph 2: Icebergs are ordinarily blue to white, although they sometimes appear dark or opaque because they carry gravel and bits of rock. They may change color with changing light conditions and cloud cover, glowing pink or gold in the morning or evening light, but this color change is generally related to the low angle of the Sun above the horizon. ■ However, travelers to Antarctica have repeatedly reported seeing green icebergs in the Weddell Sea and, more commonly, close to the Amery Ice Shelf in East Antarctica. ■ One explanation for green icebergs attributes their color to an optical illusion when blue ice is illuminated by a near-horizon red Sun, but green icebergs stand out among white and blue icebergs under a great variety of light conditions. ■ Another suggestion is that the color might be related to ice with high levels of metallic compounds, including copper and iron. ■ Recent expeditions have taken ice samples from green icebergs and ice cores—vertical, cylindrical ice samples reaching down to great depths—from the glacial ice shelves along the Antarctic continent. Analyses of these cores and

samples provide a different solution to the problem.

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

Scientists have differed as to whether icebergs appear green as a result of light conditions or because of something in the ice itself.

Where would the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

Several suggestions, ranging from light conditions to the presence of metallic compounds, have been offered to explain why some icebergs appear green.

●

●

●

Answer Choices

○Ice cores were used to determine that green icebergs were formed from the compaction of metallic compounds, including copper and iron.

○All ice shelves can produce green icebergs, but the Amery Ice Shelf is

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especially well suited to do so.

○Green icebergs form when a two layer block of ice breaks away from a glacier and capsizes, exposing the bottom sea ice to view.

○Ice cores and samples revealed that both ice shelves and green icebergs contain a layer of bubbly glacial ice and a layer of bubble-free sea ice.

○Green icebergs are white until they come into contact with seawater containing platelets and soluble organic green pigments.

○In a green iceberg, the sea ice contains large concentrations of organic matter from the seawater.

参考答案：

1. ○3
2. ○2
3. ○4
4. ○2
5. ○1
6. ○4
7. ○3
8. ○1
9. ○1
10. ○4
11. ○2
12. ○3
13. ○2
14. ○3, 4, 6

参考译文

绿色冰山

冰山就是巨大的冰块，它们的形状各不规则；他们在海面上所呈现出来的部分大概只有总量的 12%。冰山是由冰川----从格陵兰岛， 南极洲，和阿拉斯加的内陆降雪开始积累成为大河中的冰----然后缓慢流入海洋。向前的移动，在进入海洋的时候冰川底部的融化，和波浪与潮汐变化造成了冰块的断裂从而漂浮在海上。

冰山的颜色一般是从蓝到白，虽然有时会因为他们带有砂砾和石块而显得颜色很深或不透明。在不同情况的光和云量下，它们的颜色呈现可能会随之不同，如在早晨和傍晚的阳光下所呈现的耀眼的粉色或金色，但这个颜色变化大致与太阳位于海平面上的低角度有关。不管怎样，总会有到南极洲的旅游者们报告说在 Weddell Sea 看到了绿冰山，南极洲东部 Amery Ice Shelf 的附近则更为常见。

对于绿冰山的颜色的一个解释是由于纯冰被接近海平面的太阳所照射而造成的错觉，但是绿冰山在很多不同状态的阳光下都能从白色和蓝色冰山中区分出来。另一个解释就是，它的颜色可能与冰里面所含高浓度的金属化合物有关，比如铜和铁。进来的探险队从南极洲的冰架上带回了一些绿色冰山和冰核的样本----到达深度的垂直圆柱型的冰的样本。对这些冰核和样本的分析给问题提供了一个不一样的解决方法。

215 米长的冰架核已经足够用来穿透由压缩的雪组成，并含有气泡的流动冰，并随后穿透在流动冰的底部由冻结的海水形成的清透的没有气泡的冰。这个清透的冰的性质与绿冰山上的冰十分相似。科学家总结出，绿冰的构成是在两层的架冰分开并翻转过来时，暴露出的没有气泡的海水冰。

一个在 Amery Ice Shelf 西部滞留的绿冰山呈现出了两个明显的层：含有气泡的白蓝色冰，和没有气泡的绿色冰，它们中间是由 1 米长的带有沉积物的冰分隔开的。海水的侵蚀决定了绿色冰的质地。由于光的分散，裂痕处的颜色是浅绿的；而没有裂痕的地方是深绿色。绿色冰中是没有气泡的，因为它是由冻结的海水所构成，而不是压缩的雪。沿着这个地区冰架的边缘，可以发现，带有绿色色素的单细胞生物非常多，而且海水里面含有它们丰富的分解有机物质。绿冰山虽没有包含很多这些生物体的微粒，但从海水中所积累的分解有机物质还是很多的。不同于盐，分解有机物质并没有在结冰过程中被排除掉。分析表明，分解的有机物质会从太阳光中吸收足够的蓝波段，从而使冰呈现出绿色。

化学证据表明冰的小盘（微小的平面部分）是在水中构成，然后共生并附着在冰架底部形成一个 slush （部分融化的雪）。Slush 被一种未知的原理压缩成冰，而这种固体，没有气泡的冰形成于可溶解的有机物质多的水。当冰山从冰架上分离并翻转过来时，绿色冰便呈现出来了。

Chinese Pottery

China has one of the world's oldest continuous civilizations—despite invasions and occasional foreign rule. A country as vast as China with so long-lasting a civilization has a complex social and visual history, within which pottery and porcelain play a major role.

The function and status of ceramics in China varied from dynasty to dynasty, so they may be utilitarian, burial, trade-collectors', or even ritual objects, according to their quality and the era in which they were made. The ceramics fall into three broad types—earthenware, stoneware, and porcelain—for vessels, architectural items such as roof tiles, and modeled objects and figures. In addition, there was an important group of sculptures made for religious use, the majority of which were produced in earthenware.

The earliest ceramics were fired to earthenware temperatures, but as early as the fifteenth century B.C., high-temperature stonewares were being made with glazed surfaces. During the Six Dynasties period (AD 265-589), kilns in north China were producing high-fired ceramics of good quality. Whitewares produced in Hebei and Henan provinces from the seventh to the tenth centuries evolved into the highly prized porcelains of the Song dynasty (AD. 960-1279), long regarded as one of the high points in the history of China's ceramic industry. The tradition of religious sculpture extends over most historical periods but is less

clearly delineated than that of stonewares or porcelains, for it embraces the old custom of earthenware burial ceramics with later religious images and architectural ornament. Ceramic products also include lead-glazed tomb models of the Han dynasty, three-color lead-glazed vessels and figures of the Tang dynasty, and Ming three-color temple ornaments, in which the motifs were outlined in a raised trail of slip- as well as the many burial ceramics produced in imitation of vessels made in materials of higher intrinsic value.

Trade between the West and the settled and prosperous Chinese dynasties introduced new forms and different technologies. One of the most far-reaching examples is the impact of the fine ninth-century AD. Chinese porcelain wares imported into the Arab world. So admired were these pieces that they encouraged the development of earthenware made in imitation of porcelain and instigated research into the method of their manufacture. From the Middle East the Chinese acquired a blue pigment—a purified form of cobalt oxide unobtainable at that time in China—that contained only a low level of manganese. Cobalt ores found in China have a high manganese content, which produces a more muted blue-gray color. In the seventeenth century, the trading activities of the Dutch East India Company resulted in vast quantities of decorated Chinese porcelain being brought to Europe, which stimulated and influenced the work of a wide variety of wares, notably Delft. The Chinese themselves adapted many specific vessel forms from the West, such as bottles with long spouts, and designed a range of decorative patterns especially for the European market.

Just as painted designs on Greek pots may seem today to be purely decorative, whereas in fact they were carefully and precisely worked out so that at the time, their meaning was clear, so it is with Chinese pots. To twentieth-century eyes, Chinese pottery may appear merely decorative, yet to the Chinese the form of each object and its adornment had meaning and significance. The dragon represented the emperor, and the phoenix, the empress; the pomegranate indicated fertility, and a pair of fish, happiness; mandarin ducks stood for wedded bliss; the pine tree, peach, and crane are emblems of long life; and fish leaping from waves indicated success in the civil service examinations. Only when European decorative themes were introduced did these meanings become obscured or even lost.

From early times pots were used in both religious and secular contexts. The imperial court commissioned work and in the Yuan dynasty (A.D. 1279-1368) an imperial ceramic factory was established at Jingdezhen. Pots played an important part in some religious ceremonies. Long and often lyrical descriptions of the different types of ware exist that assist in classifying pots, although these sometimes confuse an already large and complicated picture.

Paragraph 2: The function and status of ceramics in China varied from dynasty to dynasty, so they may be utilitarian, burial, trade-collectors', or even ritual objects, according to their quality and the era in which they were made. The

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ceramics fall into three broad types—earthenware, stoneware, and porcelain—for vessels, architectural items such as roof tiles, and modeled objects and figures. In addition, there was an important group of sculptures made for religious use, the majority of which were produced in earthenware.

1. The word status in the passage is closest in meaning to

○ origin

○ importance

○ quality

○ design

2. According to paragraph 2, which of the following is true of Chinese ceramics?

○ The function of ceramics remained the same from dynasty to dynasty.

○ The use of ceramics as trade objects is better documented than the use of ceramics as ritual objects.

○ There was little variation in quality for any type of ceramics over time.

○ Some religious sculptures were made using the earthenware type of ceramics.

Paragraph 3: The earliest ceramics were fired to earthenware temperatures, but as early as the fifteenth century B.C., high-temperature stonewares were being made with glazed surfaces. During the Six Dynasties period (AD 265-589), kilns

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in north China were producing high-fired ceramics of good quality. Whitewares produced in Hebei and Henan provinces from the seventh to the tenth centuries evolved into the highly prized porcelains of the Song dynasty (AD. 960-1279), long regarded as one of the high points in the history of China's ceramic industry. The tradition of religious sculpture extends over most historical periods but is less clearly delineated than that of stonewares or porcelains, for it embraces the old custom of earthenware burial ceramics with later religious images and architectural ornament. Ceramic products also include lead-glazed tomb models of the Han dynasty, three-color lead-glazed vessels and figures of the Tang dynasty, and Ming three-color temple ornaments, in which the motifs were outlined in a raised trail of slip- as well as the many burial ceramics produced in imitation of vessels made in materials of higher intrinsic value.

3. The word evolve in the passage is closest in meaning to

- ○ divided
- ○ extended
- ○ developed
- ○ vanished

4. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

- ○ While stonewares and porcelains are found throughout most historical

periods, religious sculpture is limited to the ancient period.

○ Religious sculpture was created in most periods, but its history is less clear than that of stonewares or

porcelains because some old forms continued to be used even when new ones were developed.

○ While stonewares and porcelains changed throughout history, religious sculpture remained uniform in form and use.

○ The historical development of religious sculpture is relatively unclear because religious sculptures sometimes resemble earthenware architectural ornaments.

5. Paragraph 3 supports all of the following concerning the history of the ceramic industry in China EXCEPT:

○ The earliest high-fired ceramics were of poor quality.

○ Ceramics produced during the Tang and Ming dynasties sometimes incorporated multiple colors.

○ Earthenware ceramics were produced in China before stonewares were.

○ The Song dynasty period was notable for the production of high quality porcelain ceramics.

Paragraph 4：Trade between the West and the settled and prosperous Chinese dynasties introduced new forms and different technologies. One of the most far-reaching examples is the impact of the fine ninth-century AD. Chinese

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porcelain wares imported into the Arab world. So admired were these pieces that they encouraged the development of earthenware made in imitation of porcelain and instigated research into the method of their manufacture. From the Middle East the Chinese acquired a blue pigment—a purified form of cobalt oxide unobtainable at that time in China—that contained only a low level of manganese. Cobalt ores found in China have a high manganese content, which produces a more muted blue-gray color. In the seventeenth century, the trading activities of the Dutch East India Company resulted in vast quantities of decorated Chinese porcelain being brought to Europe, which stimulated and influenced the work of a wide variety of wares, notably Delft. The Chinese themselves adapted many specific vessel forms from the West, such as bottles with long spouts, and designed a range of decorative patterns especially for the European market.

6. The word instigate in the passage is closest in meaning to

- ○ improved
- ○ investigated
- ○ narrowed
- ○ caused

7. According to paragraph 4. one consequence of the trade of Chinese ceramics was

- ○ The transfer of a distinctive blue pigment from China to the Middle East
- ○ An immediate change from earthenware production to porcelain

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production in European countries

○ Chinese production of wares made for the European market

○ A decreased number of porcelain vessels available on the European market

Paragraph 5：Just as painted designs on Greek pots may seem today to be purely decorative, whereas in fact they were carefully and precisely worked out so that at the time, their meaning was clear, so it is with Chinese pots. To twentieth-century eyes, Chinese pottery may appear merely decorative, yet to the Chinese the form of each object and its adornment had meaning and significance. The dragon represented the emperor, and the phoenix, the empress; the pomegranate indicated fertility, and a pair of fish, happiness; mandarin ducks stood for wedded bliss; the pine tree, peach, and crane are emblems of long life; and fish leaping from waves indicated success in the civil service examinations. Only when European decorative themes were introduced did these meanings become obscured or even lost.

8. The word whereas in the passage is closest in meaning to

○ while

○ previously

○ surprisingly

○ because

9. In paragraph 5, the author compares the designs on Chinese pots to those on Greek pots in order to

○ emphasize that while Chinese pots were decorative. Greek pots were functional

○ argue that the designs on Chinese pots had specific meanings and were not just decorative

○ argue that twentieth-century scholars are better able to understand these designs than were ancient scholars

○ explain how scholars have identified the meaning of specific images on Chinese pots

10. Which of the following is mentioned in paragraph 5 as being symbolically represented on Chinese ceramics?

○ Chinese rulers

○ love of homeland

○ loyally to friends

○ success in trade

11. Paragraph 5 suggests which of the following about the decorations on Chinese pottery?

○ They had more importance for aristocrats than for ordinary citizens.

○ Their significance may have remained clear had the Chinese not come under foreign influence.

○ They contain some of the same images that appear on Greek pots

○ Their significance is now as clear to twentieth century observers as it was to the early Chinese.

Paragraph 6：From early times pots were used in both religious and secular contexts. The imperial court commissioned work and in the Yuan dynasty (A.D. 1279-1368) an imperial ceramic factory was established at Jingdezhen. Pots played an important part in some religious ceremonies. Long and often lyrical descriptions of the different types of ware exist that assist in classifying pots, although these sometimes confuse an already large and complicated picture.

12. The word these in the passage refers to

○ religious ceremonies

○ descriptions

○ types of ware

○ pots

Paragraph 4：Trade between the West and the settled and prosperous Chinese dynasties introduced new forms and different technologies. One of the most far-reaching examples is the impact of the fine ninth-century AD. Chinese porcelain wares imported into the Arab world. ■So admired were these pieces that they encouraged the development of earthenware made in imitation of porcelain and instigated research into the method of their manufacture. ■From

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the Middle East the Chinese acquired a blue pigment—a purified form of cobalt oxide unobtainable at that time in China—that contained only a low level of manganese. Cobalt ores found in China have a high manganese content, which produces a more muted blue-gray color. ■In the seventeenth century, the trading activities of the Dutch East India Company resulted in vast quantities of decorated Chinese porcelain being brought to Europe, which stimulated and influenced the work of a wide variety of wares, notably Delft. ■The Chinese themselves adapted many specific vessel forms from the West, such as bottles with long spouts, and designed a range of decorative patterns especially for the European market.

13. Look at the four squares [■]that indicate where the following sentence could be added to the passage.

Foreign trade was also responsible for certain innovations in coloring.

Where could the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

Ceramics have been produced in China for a very long time.

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-
-
-

Answer choices

○ The Chinese produced earthenware, stoneware, and porcelain pottery and they used their ceramics for a variety of utilitarian, architectural, and ceremonial purposes.

○ The shape and decoration of ceramics produced for religious use in China were influenced by Chinese ceramics produced for export.

○ As a result of trade relations. Chinese ceramic production changed and Chinese influenced the ceramics production of other countries

○ Chinese burial ceramics have the longest and most varied history of production and were frequently decorated with written texts that help scholars date them.

○ Before China had contact with the West, the meaning of various designs used to decorate Chinese ceramics was well understood.

○ Ceramics made in imperial factories were used in both religious and non-religious contexts

参考答案：

1. ○2

2. ○4

3. ○3

4. ○2

5. ○1

6. ○4

7. ○3

8.○1

9. ○2

10. ○1

11. ○2

12. ○2

13. ○2

14. ○1, 3, 5

参考译文

中国的陶瓷

尽管，在中国的历史上其短暂的被外国侵略以及占领，但是她仍然拥有世界上最悠久的历史以及从古时起直至今日都不断持续的文明（不知能不能直译成最悠久的礼仪或文明之邦）中国是一个大物博以及拥有悠久持续的文明的国家，而陶器和瓷器在其复杂的社会历史以及视觉美观的历史中占据了极为重要的地位。在中国，每一个朝代的陶器的功能和形态都是不同的，所以，他们中有些可能是有实用意义的，有些可能是陪葬品，有些被作为艺术收藏品，有些甚至是宗教仪式上的法器。根据制作他们的年代以及质量。瓷器可以被分为 3 大类，土质瓷器，石制瓷器，以及陶瓷制瓷器。比如，容器，诸如瓦之类的建筑的物件，模具或瓷器做的人物。另外，瓷器的类别中还有很重要的一类--主要成分是土的宗教用的瓷器。

尽管最早的瓷器制作是土器（应该是用土捏制出来的胚子）在合适的温度下烧制而成的，但是早在公元前 15 世纪，就有石制的瓷器被烧制成釉器。公元 960 年到 1279 年，这 6 个朝代的时段中，中国北方就有人用窑在高温下烧制高质量的瓷器。从第七世纪到第十世纪河北以及河南省产的白瓷逐渐的演变成为在被誉为“中国历史上最强大的陶瓷工厂”的宋朝被人广为称道的瓷器。瓷制神像（应该是比如教堂中圣母玛利亚一类人物的瓷器吧、、、）的制作方式在历史上的大部分时段都不断的改进。但是他们对人物的描素并不像石质瓷器以及瓷器描素的那么清晰。因为神像的烧制方法继承了古时候上面拥有宗教图案的土质陪葬瓷器以及建筑装饰品的烧制传统。瓷器制品也包括汉朝的古墓模型的釉器，唐 3 彩的器皿和人物，明

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朝 3 色的寺庙的装饰品，。。。。。。。。，很多陪葬瓷器都是用有内在实用价值的材料在器皿的模型中制成的。

西方国家和繁荣稳定的中国王朝之间的贸易，使瓷器匠们掌握了在瓷器制造方面的新的方法和技术。其中一个意义最为深远的例子是公元第九世纪的影响。中国的瓷器进军阿拉伯国家。阿拉伯国家对于中国的瓷器评价很高，这不仅促进了土制瓷器制作技术的发展，也促进了关于土制瓷器制作技术的一些研究的开展和进行。中东国家给中国提供一种蓝色的颜料(一种由当时在中国还没有的氧化钴过滤而得到的成分，这种成分里只含有少量的锰元素),中国自己提供的氧化钴一般都含有大量会让的蓝色变的发灰的锰元素。17 世纪，大量的中国装饰类瓷器通过与荷兰人的东印度公司的交易而流入到了欧洲，这刺激了瓷器匠们去生产更多种类的瓷器，特别是代尔福特陶器。中国人生产了很多种类似于西方器皿一类的陶器，比如带有长的喷水口的瓶子以及专门为欧洲市场设计的一些特别的装饰用的陶器。

希腊壶罐的画色设计，在今天看来也许纯粹是为了装饰用，然而并非如此，事实上他们在当时都是被精心仔细的制作出来的，这点上中国的瓷器也是一样的。20 世纪的眼光来看，中国制造的瓷器也许仅仅是装饰品，每个物件及它的装饰元素都有特定而重要的意义。龙代表了帝王，凤凰代表了皇后，石榴意味着富饶，双鱼意味着幸福，鸳鸯代表了婚姻的幸福美满，松树，桃树，以及鹤都是长寿的象征，鱼跳出水面意味着在科举上会高中状元。但是（个人认为 only 在这里不是仅仅的意思，可能是强调。。。）

当欧洲的装饰元素被引进后，这些元素也许慢慢的不再那么流行甚至开始落后。

早期的壶罐即被用于宗教上，也被用于普通的日常生活上。元朝就有过皇室在景德镇建立皇家瓷窑的例子。壶罐在宗教仪式上也有着重要的地位。尽管有时他们身上含有既复杂又很大的图像，但是这些可以帮助我们去对瓷器进行分类。

Variations in the Climate

One of the most difficult aspects of deciding whether current climatic events reveal evidence of the impact of human activities is that it is hard to get a measure of what constitutes the natural variability of the climate. We know that over the past millennia the climate has undergone major changes without any significant human intervention. We also know that the global climate system is immensely complicated and that everything is in some way connected, and so the system is capable of fluctuating in unexpected ways. We need therefore to know how much the climate can vary of its own accord in order to interpret with confidence the extent to which recent changes are natural as opposed to being the result of human activities.

Instrumental records do not go back far enough to provide us with reliable measurements of global climatic variability on timescales longer than a century. What we do know is that as we include longer time intervals, the record shows increasing evidence of slow swings in climate between different regimes. To build up a better picture of fluctuations appreciably further back in time requires us to use proxy records.

Over long periods of time, substances whose physical and chemical properties change with the ambient climate at the time can be deposited in a systematic way to provide a continuous record of changes in those properties

overtime, sometimes for hundreds or thousands of years. Generally, the layering occurs on an annual basis, hence the observed changes in the records can be dated. Information on temperature, rainfall, and other aspects of the climate that can be inferred from the systematic changes in properties is usually referred to as proxy data. Proxy temperature records have been reconstructed from ice core drilled out of the central Greenland ice cap, calcite shells embedded in layered lake sediments in Western Europe, ocean floor sediment cores from the tropical Atlantic Ocean, ice cores from Peruvian glaciers, and ice cores from eastern Antarctica. While these records provide broadly consistent indications that temperature variations can occur on a global scale, there are nonetheless some intriguing differences, which suggest that the pattern of temperature variations in regional climates can also differ significantly from each other.

What the proxy records make abundantly clear is that there have been significant natural changes in the climate over timescales longer than a few thousand years. Equally striking, however, is the relative stability of the climate in the past 10.000 years (the Holocene period).

To the extent that the coverage of the global climate from these records can provide a measure of its true variability, it should at least indicate how all the natural causes of climate change have combined. These include the chaotic fluctuations of the atmosphere, the slower but equally erratic behavior of the oceans, changes in the land surfaces, and the extent of ice and snow. Also included

will be any variations that have arisen from volcanic activity, solar activity, and, possibly, human activities.

One way to estimate how all the various processes leading to climate variability will combine is by using computer models of the global climate. They can do only so much to represent the full complexity of the global climate and hence may give only limited information about natural variability. Studies suggest that to date the variability in computer simulations is considerably smaller than in data obtained from the proxy records.

In addition to the internal variability of the global climate system itself, there is the added factor of external influences, such as volcanoes and solar activity .There is a growing body of opinion that both these physical variations have a measurable impact on the climate. Thus we need to be able to include these in our deliberations. Some current analyses conclude that volcanoes and solar activity explain quite a considerable amount of the observed variability in the period from the seventeenth to the early twentieth century's, but that they cannot be invoked to explain the rapid warming in recent decades.

Paragraph 1：One of the most difficult aspects of deciding whether current climatic events reveal evidence of the impact of human activities is that it is hard to get a measure of what constitutes the natural variability of the climate. We

know that over the past millennia the climate has undergone major changes without any significant human intervention. We also know that the global climate system is immensely complicated and that everything is in some way connected, and so the system is capable of fluctuating in unexpected ways. We need therefore to know how much the climate can vary of its own accord in order to interpret with confidence the extent to which recent changes are natural as opposed to being the result of human activities.

1. According to paragraph 1, which of the following must we find out in order to determine the impact of human activities upon climate?

- ○ The major changes in climate over the past millennia
- ○ The degree to which the climate varies naturally
- ○ The best method for measuring climatic change
- ○ The millennium when humans began to interfere with the climate

Paragraph 2：Instrumental records do not go back far enough to provide us with reliable measurements of global climatic variability on timescales longer than a century. What we do know is that as we include longer time intervals, the record shows increasing evidence of slow swings in climate between different regimes. To build up a better picture of fluctuations appreciably further back in time requires us to use proxy records.

2. According to paragraph 2, an advantage of proxy records over

instrumental records is that

○ they are more-reliable measures of climatic variability in the past century

○ they provide more-accurate measures of local temperatures

○ they provide information on climate fluctuations further back in time

○ they reveal information about the human impact on the climate

Paragraph 3：Over long periods of time, substances whose physical and chemical properties change with the ambient climate at the time can be deposited in a systematic way to provide a continuous record of changes in those properties overtime, sometimes for hundreds or thousands of years. Generally, the layering occurs on an annual basis, hence the observed changes in the records can be dated. Information on temperature, rainfall, and other aspects of the climate that can be inferred from the systematic changes in properties is usually referred to as proxy data. Proxy temperature records have been reconstructed from ice core drilled out of the central Greenland ice cap, calcite shells embedded in layered lake sediments in Western Europe, ocean floor sediment cores from the tropical Atlantic Ocean, ice cores from Peruvian glaciers, and ice cores from eastern Antarctica. While these records provide broadly consistent indications that temperature variations can occur on a global scale, there are nonetheless some intriguing differences, which suggest that the pattern of temperature variations in regional climates can also differ significantly from each other.

3. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information

○ Because physical and chemical properties of substances are unchanging, they are useful records of climate fluctuations over time

○ For hundreds or thousands of years, people have been observing changes in the chemical and physical properties of substances in order to infer climate change

○ Because it takes long periods of time for the climate to change, systematic changes in the properties of substances are difficult to observe.

○ Changes in systematically deposited substances that are affected by climate can indicate climate variations over time.

4. According to paragraph 3, scientists are able to reconstruct proxy temperature records by

○ studying regional differences in temperature variations

○ studying and dating changes in the properties of substances

○ observing changes in present day climate conditions

○ inferring past climate shifts from observations of current climatic changes

Paragraph 4：What the proxy records make abundantly clear is that there have

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been significant natural changes in the climate over timescales longer than a few thousand years. Equally striking, however, is the relative stability of the climate in the past 10.000 years (the Holocene period).

5. The word striking in the passage is closest in meaning to

- ○ noticeable
- ○ confusing
- ○ true
- ○ unlikely

Paragraph 3：Over long periods of time, substances whose physical and chemical properties change with the ambient climate at the time can be deposited in a systematic way to provide a continuous record of changes in those properties overtime, sometimes for hundreds or thousands of years. Generally, the layering occurs on an annual basis, hence the observed changes in the records can be dated. Information on temperature, rainfall, and other aspects of the climate that can be inferred from the systematic changes in properties is usually referred to as proxy data. Proxy temperature records have been reconstructed from ice core drilled out of the central Greenland ice cap, calcite shells embedded in layered lake sediments in Western Europe, ocean floor sediment cores from the tropical Atlantic Ocean, ice cores from Peruvian glaciers, and ice cores from eastern Antarctica. While these records provide broadly consistent indications that temperature variations can occur on a global scale,

there are nonetheless some intriguing differences, which suggest that the pattern of temperature variations in regional climates can also differ significantly from each other.

Paragraph 4：What the proxy records make abundantly clear is that there have been significant natural changes in the climate over timescales longer than a few thousand years. Equally striking, however, is the relative stability of the climate in the past 10.000 years (the Holocene period).

6. According to paragraphs 3 and 4, proxy data have suggested all of the following about the climate EXCEPT:

○ Regional climates may change overtime.

○ The climate has changed very little in the past 10.000 years.

○ Global temperatures vary more than regional temperatures.

○ Important natural changes in climate have occurred over large timescales.

Paragraph 5：To the extent that the coverage of the global climate from these records can provide a measure of its true variability, it should at least indicate how all the natural causes of climate change have combined. These include the chaotic fluctuations of the atmosphere, the slower but equally erratic behavior of the oceans, changes in the land surfaces, and the extent of ice and snow. Also included will be any variations that have arisen from volcanic activity, solar activity, and, possibly, human activities.

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7. The word erratic in the passage is closest in meaning to

- ○ dramatic
- ○ important
- ○ unpredictable
- ○ common

8. All of the following are mentioned in paragraph 5 as natural causes of climate change EXCEPT

- ○ atmospheric changes
- ○ the slow movement of landmasses
- ○ fluctuations in the amount of ice and snow
- ○ changes in ocean activity

Paragraph 6：One way to estimate how all the various processes leading to climate variability will combine is by using computer models of the global climate. They can do only so much to represent the full complexity of the global climate and hence may give only limited information about natural variability. Studies suggest that to date the variability in computer simulations is considerably smaller than in data obtained from the proxy records.

9. According to paragraph 6, which of the following is true of computer models of the global climate?

○ The information they produce is still limited.

○ They are currently most useful in understanding past climatic behaviors.

○ They allow researchers to interpret the data obtained from proxy records.

○ They do not provide information about regional climates

Paragraph 7：In addition to the internal variability of the global climate system itself, there is the added factor of external influences, such as volcanoes and solar activity .There is a growing body of opinion that both these physical variations have a measurable impact on the climate. Thus we need to be able to include these in our deliberations. Some current analyses conclude that volcanoes and solar activity explain quite a considerable amount of the observed variability in the period from the seventeenth to the early twentieth century's, but that they cannot be invoked to explain the rapid warming in recent decades.

10. The word deliberations in the passage is closest in meaning to

○ records

○ discussions

○ results

○ variations

11. The word invoked in the passage is closest in meaning to

○ demonstrated

○ called upon

○ supported

○ expected

12. What is the author's purpose in presenting the information in paragraph 7?

○ To compare the influence of volcanoes and solar activity on climate variability with the influence of factors external to the global climate system

○ To indicate that there are other types of influences on climate variability in addition to those previously discussed

○ To explain how external influences on climate variability differ from internal influences

○ To argue that the rapid warming of Earth in recent decades cannot be explained

Paragraph 7：In addition to the internal variability of the global climate system itself, there is the added factor of external influences, such as volcanoes and solar activity. ■There is a growing body of opinion that both these physical variations have a measurable impact on the climate. ■Thus we need to be able to include these in our deliberations. ■Some current analyses conclude that volcanoes and solar activity explain quite a considerable amount of the observed variability in the period from the seventeenth to the early twentieth century's, but that they cannot be invoked to explain the rapid warming in recent decades.■

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13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

Indeed, the contribution of volcanoes and solar activity would more likely have been to actually reduce the rate of warming slightly.

Where would the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

A number of different and complex factors influence changes in the global climate over long periods of time.

●

●

●

Answer choices

○ In the absence of instrumental records, proxy data allow scientists to infer information about past climates.

○ Scientists see a consistent pattern in the global temperature variations that have occurred in the past.

○ Computer models are used to estimate how the different causes of climate variability combine to account for the climate variability that occurs.

○ Scientists have successfully separated natural climate variation from changes related to human activities.

○ Scientists believe that activities outside the global climate system, such as volcanoes and solar activity may have significant effects on the system.

○ Scientists have concluded that human activity accounts for the rapid global warming in recent decades.

参考答案：

1. ○2

2. ○3

3. ○4

4. ○2

5. ○1

6. ○3

7. ○3

8.○2

9. ○1

10. ○2

11. ○2

12. ○2

13. ○4

14. ○1, 3, 5

参考译文

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气候变化

确定现在的气候事件是否证明人类活动影响的最大困难之一在于很难找到一种方法来确定是什么构成了气候的自然可变性。我们知道在过去的几千年里，气候在没有重大人类干预下也经历了主要变化。我们还知道全球气候系统是非常复杂的，所有因素都在某些方面互相联系，因此这个系统以意想不到的方法变化着。因此，我们需要知道气候在多大程度上是自然变化的，以便于确切解释出最近的变化在多大程度上是自然的，或相反是人类活动的结果。

仪器记录不能追溯回那么久远以提供给我们长于一个世纪的时间标准下的全球气候可变性的可信测量方法。我们所确知的就是当我们想包括更长久的时间跨度，记录揭示了在不同制度中缓慢的摇摆的更多的证据。为了建立一个略久远变化的更好的变化描述，需要我们使用替代记录。

经过很长一段时间，物理和化学特征随着当时周围的气候变化的物质将会以系统的方法沉淀，这可以提供那些特征在超长时间里变化的连续记录，这个超长时间有时可达几百年或几千年。通常，分层堆积是每年发生的，因此在记录中可观察的变化可以用来确定日期。 关于温度，降雨和气候的其他方面的信息通常都是指替代数据，这些信息可以从这种特征的系统变化中推断出来。替代温度记录已被重建通过：钻取自格陵兰冰帽中部的冰核，西欧深嵌在分层湖底沉积物中的方解石壳，取自热带大西洋的海底沉积物核，取自秘鲁冰河的冰核,和取自东南极洲

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的冰核。尽管这新记录提供了广范一致的迹象指出温度变化可在全球范围内发生，但仍存在引人发问的差异，这些差异表示区域性气候的温度变化方式可以如此不同。

代理记录所充分解释的是在长于几千年的时间跨度里存在着显著的自然气候变化。但同样令人惊讶的是在过去的一万年（全新世）中气候的相对稳定。【*全新世：在地质年表上第四纪后两世从更新世结束一直到现在岩石时期的泥沙时期——译者】

这些记录中对全球气候的覆盖度已经达到了可以提供气候可变性的方法的程度，它应该至少揭示所有引起气候变化的自然原因是怎样结合的。这些原因包括混乱的大气波动，相对较慢但相当混乱的海洋活动，地表变化和冰雪的覆盖度。还包括任何火山活动、太阳活动将会引起的变化。或许也包括人类活动引起的变化。

一种可估计所有这些导致气候变化的不同过程是如何结合的方法就是使用计算机全球气候模型。它们可以做的只有这么多来描绘全球气候的全部复杂性，因此只能提供自然变化的有限信息。研究表明迄今为止计算机模拟的可变性比取自代理记录的数据少得多。

除全球气候系统本身的内部变化之外，还存在其他外部影响的因素，如火山或太阳活动。有越来越多的观点认为这两种物理变化对气候有着可测量的影响。因此我们需要能够考虑到这些。一些现在的分析断定火山和

太阳活动解释了自 17 世纪到 20 世纪早期的相当多的可观察到的变化但他们不能用以揭示最近几十年的迅速变暖。

Seventeenth-Century European Economic Growth

In the late sixteenth century and into the seventeenth, Europe continued the growth that had lifted it out of the relatively less prosperous medieval period (from the mid 400s to the late 1400s). Among the key factors behind this growth were increased agricultural productivity and an expansion of trade.

Populations cannot grow unless the rural economy can produce enough additional food to feed more people. During the sixteenth century, farmers brought more land into cultivation at the expense of forests and fens (low-lying wetlands). Dutch land reclamation in the Netherlands in the sixteenth and seventeenth centuries provides the most spectacular example of the expansion of farmland: the Dutch reclaimed more than 36.000 acres from 1590 to 1615 alone.

Much of the potential for European economic development lay in what at first glance would seem to have been only sleepy villages. Such villages, however, generally lay in regions of relatively advanced agricultural production, permitting not only the survival of peasants but also the accumulation of an agricultural surplus for investment. They had access to urban merchants, markets, and trade routes.

Increased agricultural production in turn facilitated rural industry, an

intrinsic part of the expansion of industry. Woolens and textile manufacturers, in particular, utilized rural cottage (in-home) production, which took advantage of cheap and plentiful rural labor. In the German states, the ravages of the Thirty Years' War (1618-1648) further moved textile production into the countryside. Members of poor peasant families spun or wove cloth and linens at home for scant remuneration in an attempt to supplement meager family income.

More extended trading networks also helped develop Europe's economy in this period. English and Dutch ships carrying rye from the Baltic states reached Spain and Portugal. Population growth generated an expansion of small-scale manufacturing, particularly of handicrafts, textiles, and metal production in England, Flanders, parts of northern Italy, the southwestern German states, and parts of Spain. Only iron smelting and mining required marshaling a significant amount of capital (wealth invested to create more wealth).

The development of banking and other financial services contributed to the expansion of trade. By the middle of the sixteenth century, financiers and traders commonly accepted bills of exchange in place of gold or silver for other goods. Bills of exchange, which had their origins in medieval Italy, were promissory notes (written promises to pay a specified amount of money by a certain date) that could be sold to third parties. In this way, they provided credit. At mid-century, an Antwerp financier only slightly exaggerated when he claimed, “0ne can no more trade without bills of exchange than sail without water." Merchants no longer had

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to carry gold and silver over long, dangerous journeys. An Amsterdam merchant purchasing soap from a merchant in Marseille could go to an exchanger and pay the exchanger the equivalent sum in guilders, the Dutch currency. The exchanger would then send a bill of exchange to a colleague in Marseille, authorizing the colleague to pay the Marseille merchant in the merchant's own currency after the actual exchange of goods had taken place.

Bills of exchange contributed to the development of banks, as exchangers began to provide loans. Not until the eighteenth century, however, did such banks as the Bank of Amsterdam and the Bank of England begin to provide capital for business investment. Their principal function was to provide funds for the state.

The rapid expansion in international trade also benefitted from an infusion of capital, stemming largely from gold and silver brought by Spanish vessels from the Americas. This capital financed the production of goods, storage, trade, and even credit across Europe and overseas. Moreover an increased credit supply was generated by investments and loans by bankers and wealthy merchants to states and by joint-stock partnerships - an English innovation (the first major company began in 1600). Unlike short-term financial cooperation between investors for a single commercial undertaking, joint-stock companies provided permanent funding of capital by drawing on the investments of merchants and other investors who purchased shares in the company.

Paragraph 1: In the late sixteenth century and into the seventeenth, Europe continued the growth that had lifted it out of the relatively less prosperous medieval period (from the mid 400s to the late 1400s). Among the key factors behind this growth were increased agricultural productivity and an expansion of trade.

1. According to paragraph 1, what was true of Europe during the medieval period?

- ○ Agricultural productivity declined.
- ○ There was relatively little economic growth.
- ○ The general level of prosperity declined.
- ○ Foreign trade began to play an important role in the economy.

2. The word key in the passage is closest in meaning to

- ○ historical
- ○ many
- ○ important
- ○ hidden

Paragraph 2: Populations cannot grow unless the rural economy can produce enough additional food to feed more people. During the sixteenth century, farmers brought more land into cultivation at the expense of forests and fens

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(low-lying wetlands). Dutch land reclamation in the Netherlands in the sixteenth and seventeenth centuries provides the most spectacular example of the expansion of farmland: the Dutch reclaimed more than 36.000 acres from 1590 to 1615 alone.

3. According to paragraph 2, one effect of the desire to increase food production was that

- ○ land was cultivated in a different way
- ○ more farmers were needed
- ○ the rural economy was weakened
- ○ forests and wetlands were used for farming

Paragraph 3：Much of the potential for European economic development lay in what at first glance would seem to have been only sleepy villages. Such villages, however, generally lay in regions of relatively advanced agricultural production, permitting not only the survival of peasants but also the accumulation of an agricultural surplus for investment. They had access to urban merchants, markets, and trade routes.

4. According to paragraph 3, what was one reason villages had such great economic potential?

- ○ Villages were located in regions where agricultural production was relatively advanced.

○ Villages were relatively small in population and size compared with urban areas.

○ Some village inhabitants made investments in industrial development.

○ Village inhabitants established markets within their villages.

Paragraph 4：Increased agricultural production in turn facilitated rural industry, an intrinsic part of the expansion of industry. Woolens and textile manufacturers, in particular, utilized rural cottage (in-home) production, which took advantage of cheap and plentiful rural labor. In the German states, the ravages of the Thirty Years' War (1618-1648) further moved textile production into the countryside. Members of poor peasant families spun or wove cloth and linens at home for scant remuneration in an attempt to supplement meager family income.

5. Paragraph 4 supports the idea that increased agricultural production was important for the expansion of industry primarily because it.

○ increased the number of available workers in rural areas

○ provided new types of raw materials for use by industry

○ resulted in an improvement in the health of the rural cottage workers used by manufacturers

○ helped repair some of the ravages of the Thirty Years' War

6. The word meager in the passage is closest in meaning to

○ very necessary

○ very low

○ traditional

○ primary

Paragraph 5：More extended trading networks also helped develop Europe's economy in this period. English and Dutch ships carrying rye from the Baltic states reached Spain and Portugal. Population growth generated an expansion of small-scale manufacturing, particularly of handicrafts, textiles, and metal production in England, Flanders, parts of northern Italy, the southwestern German states, and parts of Spain. Only iron smelting and mining required marshaling a significant amount of capital (wealth invested to create more wealth).

7. Why does the author mention that English and Dutch ships carrying rye from the Baltic states reached Spain and Portugal?

○ To suggest that England and the Netherlands were the two most important trading nations in seventeenth-century Europe

○ To suggest how extensive trading relations were

○ To contrast the importance of agricultural products with manufactured products

○ To argue that shipping introduced a range of new products

Paragraph 6：The development of banking and other financial services contributed to the expansion of trade. By the middle of the sixteenth century, financiers and traders commonly accepted bills of exchange in place of gold or silver for other goods. Bills of exchange, which had their origins in medieval Italy, were promissory notes (written promises to pay a specified amount of money by a certain date) that could be sold to third parties. In this way, they provided credit. At mid-century, an Antwerp financier only slightly exaggerated when he claimed, “0ne can no more trade without bills of exchange than sail without water." Merchants no longer had to carry gold and silver over long, dangerous journeys. An Amsterdam merchant purchasing soap from a merchant in Marseille could go to an exchanger and pay the exchanger the equivalent sum in guilders, the Dutch currency. The exchanger would then send a bill of exchange to a colleague in Marseille, authorizing the colleague to pay the Marseille merchant in the merchant's own currency after the actual exchange of goods had taken place.

8. By including the quotation in paragraph 6 by the financier from Antwerp, the author is emphasizing that

- ○ sailing was an important aspect of the economy
- ○ increasing the number of water routes made trade possible
- ○ bills of exchange were necessary for successful trading
- ○ financiers often exaggerated the need for bills of exchange

9. According to paragraph 6, merchants were able to avoid the risk of

carrying large amounts of gold and silver by

- ○ using third parties in Marseille to buy goods for them
- ○ doing all their business by using Dutch currency
- ○ paying for their purchases through bills of exchange
- ○ waiting to pay for goods until the goods had been delivered

Paragraph 7：Bills of exchange contributed to the development of banks, as exchangers began to provide loans. Not until the eighteenth century, however, did such banks as the Bank of Amsterdam and the Bank of England begin to provide capital for business investment. Their principal function was to provide funds for the state.

10. According to paragraph 7, until the eighteenth century, it was the principal function of which of the following to provide funds for the state?

- ○ Bills of exchange
- ○ Exchangers who took loans
- ○ Banks
- ○ Business investment

Paragraph 8：The rapid expansion in international trade also benefitted from an infusion of capital, stemming largely from gold and silver brought by Spanish vessels from the Americas. This capital financed the production of goods, storage, trade, and even credit across Europe and overseas. Moreover an increased credit

supply was generated by investments and loans by bankers and wealthy merchants to states and by joint-stock partnerships - an English innovation (the first major company began in 1600). Unlike short-term financial cooperation between investors for a single commercial undertaking, joint-stock companies provided permanent funding of capital by drawing on the investments of merchants and other investors who purchased shares in the company.

11. The phrase an English innovation in the passage is closest in meaning to

- ○ a new development introduced by the English
- ○ an arrangement found only in England
- ○ a type of agreement negotiated in English
- ○ a type of partnership based on English law

12. According to paragraph 8, each of the following was a source of funds used to finance economic expansion EXCEPT

- ○ groups of investors engaged in short-term financial cooperation
- ○ the state
- ○ wealthy merchants
- ○ joint-stock companies

Paragraph 6：The development of banking and other financial services contributed to the expansion of trade. By the middle of the sixteenth century,

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financiers and traders commonly accepted bills of exchange in place of gold or silver for other goods. Bills of exchange, which had their origins in medieval Italy, were promissory notes (written promises to pay a specified amount of money by a certain date) that could be sold to third parties. In this way, they provided credit. ■At mid-century, an Antwerp financier only slightly exaggerated when he claimed, “0ne can no more trade without bills of exchange than sail without water." ■Merchants no longer had to carry gold and silver over long, dangerous journeys. ■An Amsterdam merchant purchasing soap from a merchant in Marseille could go to an exchanger and pay the exchanger the equivalent sum in guilders, the Dutch currency. ■The exchanger would then send a bill of exchange to a colleague in Marseille, authorizing the colleague to pay the Marseille merchant in the merchant's own currency after the actual exchange of goods had taken place.

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

They could also avoid having to identify and assess the value of a wide variety of coins issued in many different places.

Where would the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer that express the most important ideas in the passage. Some sentences do not belong in

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the summary because they express ideas that not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

In late sixteenth-and early seventeenth-century Europe, increased agricultural production and the expansion of trade were important in economic growth

●

●

●

Answer choices

○ Bringing more land under cultivation produced enough food to create surpluses for trade and investment as well as for supporting the larger populations that led to the growth of rural industry.

○ Most rural villages established an arrangement with a nearby urban center that enabled villagers to take advantage of urban markets to sell any handicrafts they produced.

○ Increases in population and the expansion of trade led to increased manufacturing, much of it small-scale in character but some requiring significant capital investment.

○ Increased capital was required for the production of goods, for storage, for trade, and for the provision of credit throughout of Europe as well as distant markets overseas.

○ Bills of exchange were invented in medieval Italy but became less important

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as banks began to provide loans for merchants.

○ The expansion of trade was facilitated by developments in banking and financial services and benefitted from the huge influx of capital in the form of gold silver from the Americas

参考答案：

1. ○2

2. ○3

3. ○4

4. ○1

5. ○1

6. ○2

7. ○2

8.○3

9. ○3

10. ○3

11. ○1

12. ○2

13. ○3

14. ○1, 3, 6

参考译文

17 世纪的欧洲经济增长

在十六和十七世纪之交，欧洲经济保持着脱离中世纪（公元 5 世纪中至公元 15 世纪末）衰微的势头继续增长。拉动经济增长最关键的因素是农业生产力的提高和贸易规模的扩大。

如果乡村经济不能生产足够的食物的话，人口增长就不可能。在十六世纪的时候，农民们砍伐森林，开发湿地来扩大耕地面积。荷兰的土地开发利用无疑是十六到十七世纪中最引人注目的：单单是在 1590 年到 1615 年间，荷兰就开发利用了 36000 多英亩的土地。

欧洲经济增长的巨大潜力是在那些第一眼看过去好像沉睡着的乡镇。这些乡镇大多地处农业相对发达的地区，在这儿，不仅农民得以生存，可用于投资的富余农产品也得以积累。这些乡镇邻近城市的商人，市场以及贸易线路。

农业的发展反过来促进了工业中的一份子——农村工业的发展。尤其是羊毛和纺织制造商们，他们利用农村大量廉价的劳动力来进行工场制的生产。在德国，由“三十年战争”所造成的破坏进一步促使纺织业向乡村迁移。为了补贴本已经微薄的家庭收入，贫困潦倒的农民们通过在家纺织衣料或亚麻来换取少量的报酬。

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扩大的贸易网络也促进了这段时期欧洲经济的增长。英国和荷兰的商船从波罗的海各国带黑麦到西班牙和葡萄牙来卖。在英国，佛南德斯，意大利北部，德国西南部和西班牙部分地区，人口的增长促进了小规模手工业的发展，尤其是手工艺品，纺织品和金属制品。

银行和其他金融服务促进了贸易的发展。到十六世纪中叶，从事金融和贸易的人员已经基本接受了使用汇票取代金银进行交易。始于中世纪意大利的汇票是一种可以和第三方进行交易的期票（其上注明在规定时间内支付特定数额的钱）。就这样，这些汇票具有了信用。在这个世纪的中期，一位安特卫普的金融从业人员并没有过分夸张地说：“缺少了汇票，贸易根本就不可能进行下去，比没有水的航行还不可能。”商人就此再也不用携带金银踏上漫长危险的旅途了。一位向马赛商人购买肥皂的阿姆斯特丹商人可以找到一位兑换人，然后付给那位兑换人等值的荷兰货币——荷兰盾。那位兑换方其后将会给他在马赛的同事寄去汇票，凭借此汇票，当货物交易完成后，马赛的兑换人就会以卖家本国的货币支付给卖家相应的钱。

随着兑换人开始提供贷款服务，汇票对于银行的发展起到了促进作用。然而，直到十八世纪，诸如阿姆斯特丹银行和英格兰银行才开始商业投资贷款业务。它们的首要功能是为政府提供资金。

由西班牙商船从美国带来的金银成为了促进国际贸易快速发展的资本注入。这些资本资助了商品的生产，存储，交易，甚至是全欧洲乃至海外

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的贷款。不仅如此，投资，政府向银行家和商人的借贷以及一项英国的革新——股份制公司（第一家主要的股份制公司始于 1600 年）都增加了贷款的供应。与由投资家组成的以单个商业项目为目的的短期财团不同，股份制公司通过商人和其他投资者购买公司股份所带来的投资提供长期的资金筹集。

Ancient Egyptian Sculpture

In order to understand ancient Egyptian art, it is vital to know as much as possible of the elite Egyptians' view of the world and the functions and contexts of the art produced for them. Without this knowledge we can appreciate only the formal content of Egyptian art, and we will fail to understand why it was produced or the concepts that shaped it and caused it to adopt its distinctive forms. In fact, a lack of understanding concerning the purposes of Egyptian art has often led it to be compared unfavorably with the art of other cultures: Why did the Egyptians not develop sculpture in which the body turned and twisted through space like classical Greek statuary? Why do the artists seem to get left and right confused? And why did they not discover the geometric perspective as European artists did in the Renaissance? The answer to such questions has nothing to do with a lack of skill or imagination on the part of Egyptian artists and everything to do with the purposes for which they were producing their art.

The majority of three-dimensional representations, whether standing, seated, or kneeling, exhibit what is called frontality: they face straight ahead, neither twisting nor turning. When such statues are viewed in isolation, out of their original context and without knowledge of their function, it is easy to criticize them for their rigid attitudes that remained unchanged for three thousand years. Frontality is, however, directly related to the functions of Egyptian statuary and the contexts in which the statues were set up. Statues were created not for their decorative effect but to play a primary role in the cults of the gods, the king, and

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the dead. They were designed to be put in places where these beings could manifest themselves in order to be the recipients of ritual actions. Thus it made sense to show the statue looking ahead at what was happening in front of it, so that the living performer of the ritual could interact with the divine or deceased recipient. Very often such statues were enclosed in rectangular shrines or wall niches whose only opening was at the front, making it natural for the statue to display frontality. Other statues were designed to be placed within an architectural setting, for instance, in front of the monumental entrance gateways to temples known as pylons, or in pillared courts, where they would be placed against or between pillars: their frontality worked perfectly within the architectural context.

Statues were normally made of stone, wood, or metal. Stone statues were worked from single rectangular blocks of material and retained the compactness of the original shape. The stone between the arms and the body and between the legs in standing figures or the legs and the seat in seated ones was not normally cut away. From a practical aspect this protected the figures against breakage and psychologically gives the images a sense of strength and power, usually enhanced by a supporting back pillar. By contrast, wooden statues were carved from several pieces of wood that were pegged together to form the finished work, and metal statues were either made by wrapping sheet metal around a wooden core or cast by the lost wax process. The arms could be held away from the body and carry separate items in their hands; there is no back pillar. The effect is

altogether lighter and freer than that achieved in stone, but because both perform the same function, formal wooden and metal statues still display frontality.

Apart from statues representing deities, kings, and named members of the elite that can be called formal, there is another group of three-dimensional representations that depicts generic figures, frequently servants, from the nonelite population. The function of these is quite different. Many are made to be put in the tombs of the elite in order to serve the tomb owners in the afterlife. Unlike formal statues that are limited to static poses of standing, sitting, and kneeling, these figures depict a wide range of actions, such as grinding grain, baking bread, producing pots, and making music, and they are shown in appropriate poses, bending and squatting as they carry out their tasks.

Paragraph 1: In order to understand ancient Egyptian art, it is vital to know as much as possible of the elite Egyptians' view of the world and the functions and contexts of the art produced for them. Without this knowledge we can appreciate only the formal content of Egyptian art, and we will fail to understand why it was produced or the concepts that shaped it and caused it to adopt its distinctive forms. In fact, a lack of understanding concerning the purposes of Egyptian art has often led it to be compared unfavorably with the art of other cultures: Why did the Egyptians not develop sculpture in which the body turned and twisted through space like classical Greek statuary? Why do the artists

seem to get left and right confused? And why did they not discover the geometric perspective as European artists did in the Renaissance? The answer to such questions has nothing to do with a lack of skill or imagination on the part of Egyptian artists and everything to do with the purposes for which they were producing their art.

1. The word vital in the passage is closest in

- ○ attractive
- ○ essential
- ○ usual
- ○ practical

2. Paragraph 1 suggests that one reason Egyptian art is viewed less favorably than other art is that Egyptian art lacks

- ○ a realistic sense of human body proportion
- ○ a focus on distinctive forms of varying sizes
- ○ the originality of European art
- ○ the capacity to show the human body in motion

3. In paragraph 1, the author mentions all of the following as necessary in appreciating Egyptian art EXCEPT an understanding of

- ○ the reasons why the art was made
- ○ the nature of aristocratic Egyptian beliefs

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- the influences of Egyptian art on later art such as classical Greek art
- how the art was used

Paragraph 2：The majority of three-dimensional representations, whether standing, seated, or kneeling, exhibit what is called frontality: they face straight ahead, neither twisting nor turning. When such statues are viewed in isolation, out of their original context and without knowledge of their function, it is easy to criticize them for their rigid attitudes that remained unchanged for three thousand years. Frontality is, however, directly related to the functions of Egyptian statuary and the contexts in which the statues were set up. Statues were created not for their decorative effect but to play a primary role in the cults of the gods, the king, and the dead. They were designed to be put in places where these beings could manifest themselves in order to be the recipients of ritual actions. Thus it made sense to show the statue looking ahead at what was happening in front of it, so that the living performer of the ritual could interact with the divine or deceased recipient. Very often such statues were enclosed in rectangular shrines or wall niches whose only opening was at the front, making it natural for the statue to display frontality. Other statues were designed to be placed within an architectural setting, for instance, in front of the monumental entrance gateways to temples known as pylons, or in pillared courts, where they would be placed against or between pillars: their frontality worked perfectly within the architectural context.

4. According to paragraph 2, why are Egyptian statues portrayed frontalty?

○ To create a psychological effect of distance and isolation

○ To allow them to fulfill their important role in ceremonies of Egyptian life

○ To provide a contrast to statues with a decorative function

○ To suggest the rigid, unchanging Egyptian philosophical attitudes

5. The word context in the passage is closest in meaning to

○ connection

○ influence

○ environment

○ requirement

6. The author mentions an architectural setting in the passage in order to

○ suggest that architecture was as important as sculpture to Egyptian artists

○ offer 3 further explanation for the frontal pose of Egyptian statues

○ explain how the display of statues replaced other forms of architectural decoration

○ illustrate the religious function of Egyptian statues

7. The word they in the passage refers to

○ statues

○ gateways

○ temples

○ pillared courts

Paragraph 3：Statues were normally made of stone, wood, or metal. Stone statues were worked from single rectangular blocks of material and retained the compactness of the original shape. The stone between the arms and the body and between the legs in standing figures or the legs and the seat in seated ones was not normally cut away. From a practical aspect this protected the figures against breakage and psychologically gives the images a sense of strength and power, usually enhanced by a supporting back pillar. By contrast, wooden statues were carved from several pieces of wood that were pegged together to form the finished work, and metal statues were either made by wrapping sheet metal around a wooden core or cast by the lost wax process. The arms could be held away from the body and carry separate items in their hands; there is no back pillar. The effect is altogether lighter and freer than that achieved in stone, but because both perform the same function, formal wooden and metal statues still display frontality.

8. According to paragraph 3, why were certain areas of a stone statue left uncarved?

○ To prevent damage by providing physical stability

○ To emphasize that the material was as important as the figure itself

○ To emphasize that the figure was not meant to be a real human being

○ To provide another artist with the chance to finish the carving

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9. The word core in the passage is closest in meaning to

- material
- layer
- center
- frame

10. According to paragraph 3, which of the following statements about wooden statues is true?

- Wooden statues were usually larger than stone statues.
- Wooden statues were made from a single piece of wood.
- Wooden statues contained pieces of metal or stone attached to the front.
- Wooden statues had a different effect on the viewer than stone statues.

Paragraph 4：Apart from statues representing deities, kings, and named members of the elite that can be called formal, there is another group of three-dimensional representations that depicts generic figures, frequently servants, from the nonelite population. The function of these is quite different. Many are made to be put in the tombs of the elite in order to serve the tomb owners in the afterlife. Unlike formal statues that are limited to static poses of standing, sitting, and kneeling, these figures depict a wide range of actions, such as grinding grain, baking bread, producing pots, and making music, and they are shown in appropriate poses, bending and squatting as they carry out their tasks.

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11. The word depicts in the passage is closest in meaning to

○ imagines

○ classifies

○ elevates

○ portrays

12. According to paragraph 4, what is the difference between statues that represent the Egyptian elite and statues that represent the nonelite classes?

○ Statues of the elite are included in tombs, but statues of the nonelite are not.

○ Statues of the elite are in motionless poses, while statues of the nonelite are in active poses.

○ Statues of the elite are shown standing, while statues of the nonelite are shown sitting or kneeling

○ Statues of the elite serve an important function, while statues of the nonelite are decorative

Paragraph 4：Apart from statues representing deities, kings, and named members of the elite that can be called formal, there is another group of three-dimensional representations that depicts generic figures, frequently servants, from the nonelite population. ■The function of these is quite different. ■Many are made to be put in the tombs of the elite in order to serve the tomb

owners in the afterlife. ■Unlike formal statues that are limited to static poses of standing, sitting, and kneeling, these figures depict a wide range of actions, such as grinding grain, baking bread, producing pots, and making music, and they are shown in appropriate poses, bending and squatting as they carry out their tasks. ■

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

In fact, it is the action and not the figure itself that is important.

Where would the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

The distinctive look of ancient Egyptian sculpture was determined largely by its function.

●

●

●

Answer Choices

○ The twisted forms of Egyptian statues indicate their importance in ritual actions.

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○ The reason Egyptian statues are motionless is linked to their central role in cultural rituals.

○ Stone, wood, and metal statues all display the feature of frontality.

○ Statues were more often designed to be viewed in isolation rather than placed within buildings.

○ The contrasting poses used in statues of elite and nonelite Egyptians reveal their difference in social status.

○ Although the appearances of formal and generic statues differ, they share the same function.

参考答案：

1. ○2

2. ○4

3. ○3

4. ○2

5. ○3

6. ○2

7. ○1

8.○1

9. ○3

10. ○4

11. ○4

12. ○2

13. ○4

14. ○2, 3, 5

参考译文

古埃及雕塑

为了能深入理解古埃及艺术，极为重要的一点是要尽可能多地了解其精英阶层的世界观以及当时艺术创造的功能和背景。若是没有这些认识，我们只能窥探到古埃及艺术的外在情境而无法理解它们创造出来的目的和所秉持的理念，也无法得知其采用的独特艺术形式的原因。事实上，正是因为人们缺乏对这些根本意义的了解，让古埃及文化艺术在与其他艺术进行对比时往往遭到质疑：为什么古埃及的雕塑作品不像古希腊的经典作品那样，在空间上进行弯曲和旋转？为什么那些艺术家看上去似乎都左右不分？又是为什么，在那些艺术作品里，完全没有体现过文艺复兴时期欧洲艺术里普遍采用的几何透视？然而，这些问题的答案完全不能说明古埃及的艺术家技艺不佳或者缺乏想象力，而恰恰体现了他们创造这些艺术的意义所在。

在大部分立体三维的雕像中，无论是站着，坐着抑或是跪着的，都体现着一种成为“正面描绘”的手法：它们往往直面前方，从不弯曲或翻转。如果脱离对其原始情境的了解和功能作用的认识这样单独看去，你将会对它们三千年不变的僵硬姿态发出责难。然而事实上，这种“正面描绘”的展示手法与古埃及雕塑的功能和创造背景有着密切的联系。当时，雕塑被创造出来不仅仅作为装饰，更重要的是应用于对神灵、国王和逝者的祭祀典礼上。它们被特地放置着，使那些接受膜拜的神灵和人物得以显现，能够更直接地观看到整个仪式的表演，并能与表演者互

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通心灵，传达神意。这些雕塑通常被放置在只有正面开口的矩形神龛或者壁龛中，这样也使得这些作品必须通过正面展现。有些雕塑也被放置在建筑系列中，比如说，塔门（神殿通道入口的纪念碑）的正前方，和支柱结构法庭中的支柱对面或者两柱之间——正是这种正面展示方式让这些雕塑都与周围的建筑环境相得益彰。

这些雕塑通常是由石头，木材和金属做成的。石制雕像是用长方形的石料制成，并且保持着原有的形状和比例。站姿雕塑的身体与胳膊之间、两腿之间的石料或者是坐姿石像的大腿与座位之间的石料通常不会去掉。从实际的外形来看通常石像会在背部增加一个支撑柱已达到保护石像的外形以免出现断裂并且在心理上展现并且增强一种力量与权利的感觉。与之相比，木质雕像是把许多块木头钉在一起再进行雕刻而成的，金属雕塑是在木质的内里外涂上一层薄薄的金属，或是再用蜡抛光。手臂可以离开身体并且保持拿在手中的东西与手之间相隔离。它们也没有背部支柱。效果相比于石质雕塑更亮表述也更自如。但是因为都是用于相同的用途，木质的和金属的雕塑依旧是正面描绘的表现形式。

除去为神灵，国王和有记载的贵族成员所塑的雕像会有特定的外形，其他的非贵族成员中和频繁出现的仆人都是用通用的一般化外表来描绘的。很多都被制作出来放进贵族的棺材为的是在来生服侍墓地的主人。不像一般的雕塑那样局限在站、坐或者跪几个静态的姿势里。这些图像描绘的行动相当多样，例如研磨谷物，烤焙面包，制作瓦罐或者演奏音乐，同时他们以适当的姿势，或弯腰或蹲下来完成他们的工作。

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Orientation and Navigation

To South Americans, robins are birds that fly north every spring. To North Americans, the robins simply vacation in the south each winter. Furthermore, they fly to very specific places in South America and will often come back to the same trees in North American yards the following spring. The question is not why they would leave the cold of winter so much as how they find their way around. The question perplexed people for years, until, in the 1950s, a German scientist named Gustave Kramer provided some answers and, in the process, raised new questions.

Kramer initiated important new kinds of research regarding how animals orient and navigate. Orientation is simply facing in the right direction; navigation involves finding ones way from point A to point B.

Early in his research, Kramer found that caged migratory birds became very restless at about the time they would normally have begun migration in the wild. Furthermore, he noticed that as they fluttered around in the cage, they often launched themselves in the direction of their normal migratory route. He then set up experiments with caged starlings and found that their orientation was, in fact, in the proper migratory direction except when the sky was overcast, at which times there was no clear direction to their restless movements. Kramer surmised, therefore, that they were orienting according to the position of the

Sun. To test this idea, he blocked their view of the Sun and used mirrors to change its apparent position. He found that under these circumstances, the birds oriented with respect to the new "Sun." They seemed to be using the Sun as a compass to determine direction. At the time, this idea seemed preposterous. How could a bird navigate by the Sun when some of us lose our way with road maps? Obviously, more testing was in order.

So, in another set of experiments, Kramer put identical food boxes around the cage, with food in only one of the boxes. The boxes were stationary, and the one containing food was always at the same point of the compass. However, its position with respect to the surroundings could be changed by revolving either the inner cage containing the birds or the outer walls, which served as the background. As long as the birds could see the Sun, no matter how their surroundings were altered, they went directly to the correct food box. Whether the box appeared in front of the right wall or the left wall, they showed no signs of confusion. On overcast days, however, the birds were disoriented and had trouble locating their food box.

In experimenting with artificial suns, Kramer made another interesting discovery. If the artificial Sun remained stationary, the birds would shift their direction with respect to it at a rate of about 15 degrees per hour, the Sun's rate of movement across the sky. Apparently, the birds were assuming that the "Sun" they saw was moving at that rate. When the real Sun was visible, however, the birds

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maintained a constant direction as it moved across the sky. In other words, they were able to compensate for the Sun's movement. This meant that some sort of biological clock was operating-and a very precise clock at that.

What about birds that migrate at night? Perhaps they navigate by the night sky. To test the idea, caged night-migrating birds were placed on the floor of a planetarium during their migratory period. A planetarium is essentially a theater with a domelike ceiling onto which a night sky can be projected for any night of the year. When the planetarium sky matched the sky outside, the birds fluttered in the direction of their normal migration. But when the dome was rotated, the birds changed their direction to match the artificial sky. The results clearly indicated that the birds were orienting according to the stars.

There is accumulating evidence indicating that birds navigate by using a wide variety of environmental cues. Other areas under investigation include magnetism, landmarks, coastlines, sonar, and even smells. The studies are complicated by the fact that the data are sometimes contradictory and the mechanisms apparently change from time to time. Furthermore, one sensory ability may back up another.

Paragraph 1: To South Americans, robins are birds that fly north every spring. To North Americans, the robins simply vacation in the south each winter.

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Furthermore, they fly to very specific places in South America and will often come back to the same trees in North American yards the following spring. The question is not why they would leave the cold of winter so much as how they find their way around. The question perplexed people for years, until, in the 1950s, a German scientist named Gustave Kramer provided some answers and. in the process, raised new questions.

1. Which of the following can be inferred about bird migration from paragraph 1?

○ Birds will take the most direct migratory route to their new habitat.

○ The purpose of migration is to join with larger groups of birds.

○ Bird migration generally involves moving back and forth between north and south.

○ The destination of birds' migration can change from year to year.

2. The word perplexed in the passage is closest in meaning to

○ defeated

○ interested

○ puzzled

○ occupied

Paragraph 3: Early in his research, Kramer found that caged migratory birds became very restless at about the time they would normally have begun

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migration in the wild. Furthermore, he noticed that as they fluttered around in the cage, they often launched themselves in the direction of their normal migratory route. He then set up experiments with caged starlings and found that their orientation was. in fact, in the proper migratory direction except when the sky was overcast, at which times there was no clear direction to their restless movements. Kramer surmised, therefore, that they were orienting according to the position of the Sun. To test this idea, he blocked their view of the Sun and used mirrors to change its apparent position. He found that under these circumstances, the birds oriented with respect to the new "Sun." They seemed to be using the Sun as a compass to determine direction. At the time, this idea seemed preposterous How could a bird navigate by the Sun when some of us lose our way with road maps? Obviously, more testing was in order.

3. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○ Experiments revealed that caged starlings displayed a lack of directional sense and restless movements.

○ Experiments revealed that caged starlings were unable to orient themselves in the direction of their normal migratory route.

○ Experiments revealed that the restless movement of caged starlings had no clear direction.

○ Experiments revealed that caged starlings' orientation was accurate

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unless the weather was overcast.

4. The word preposterous in the passage is closest in meaning to

- ○ unbelievable
- ○ inadequate
- ○ limited
- ○ creative

5. According to paragraph 3, why did Kramer use mirrors to change the apparent position of the Sun?

- ○ To test the effect of light on the birds' restlessness
- ○ To test whether birds were using the Sun to navigate
- ○ To simulate the shifting of light the birds would encounter along their regular migratory route
- ○ To cause the birds to migrate at a different time than they would in the wild

6. According to paragraph 3, when do caged starlings become restless?

- ○ When the weather is overcast
- ○ When they are unable to identify their normal migratory route
- ○ When their normal time for migration arrives
- ○ When mirrors are used to change the apparent position of the Sun

Paragraph 4：So, in another set of experiments, Kramer put identical food boxes around the cage, with food in only one of the boxes. The boxes were stationary, and the one containing food was always at the same point of the compass. However, its position with respect to the surroundings could be changed by revolving either the inner cage containing the birds or the outer walls, which served as the background. As long as the birds could see the Sun, no matter how their surroundings were altered, they went directly to the correct food box. Whether the box appeared in front of the right wall or the left wall, they showed no signs of confusion. On overcast days, however, the birds were disoriented and had trouble locating their food box.

7. Which of the following can be inferred from paragraph 4 about Kramer s reason for filling one food box and leaving the rest empty?

○ He believed the birds would eat food from only one box.

○ He wanted to see whether the Sun alone controlled the birds' ability to navigate toward the box with food.

○ He thought that if all the boxes contained food, this would distract the birds from following their migratory route.

○ He needed to test whether the birds preferred having the food at any particular point of the compass.

Paragraph 5：In experimenting with artificial suns, Kramer made another interesting discovery. If the artificial Sun remained stationary, the birds would

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shift their direction with respect to it at a rate of about 15 degrees per hour, the Sun's rate of movement across the sky. Apparently, the birds were assuming that the "Sun" they saw was moving at that rate. When the real Sun was visible, however, the birds maintained a constant direction as it moved across the sky. In other words, they were able to compensate for the Sun's movement. This meant that some sort of biological clock was operating-and a very precise clock at that.

8. According to paragraph 5, how did the birds fly when the real Sun was visible?

○ They kept the direction of their flight constant.

○ They changed the direction of their flight at a rate of 15 degrees per hour.

○ They kept flying toward the Sun.

○ They flew in the same direction as the birds that were seeing the artificial Sun

9. The experiment described in paragraph 5 caused Kramer to conclude that birds possess a biological clock because

○ when birds navigate they are able to compensate for the changing position of the Sun in the sky

○ birds innate bearings keep them oriented in a direction that is within 15 degrees of the Suns direction

○ birds' migration is triggered by natural environmental cues, such as the position of the Sun

○ birds shift their direction at a rate of 15 degrees per hour whether the Sun is visible or not

Paragraph 6：What about birds that migrate at night? Perhaps they navigate by the night sky. To test the idea, caged night-migrating birds were placed on the floor of a planetarium during their migratory period. A planetarium is essentially a theater with a domelike ceiling onto which a night sky can be projected for any night of the year. When the planetarium sky matched the sky outside, the birds fluttered in the direction of their normal migration. But when the dome was rotated, the birds changed their direction to match the artificial sky. The results clearly indicated that the birds were orienting according to the stars.

10. According to paragraph 6, how did the birds navigate in the planetarium's nighttime environment?

○ By waiting for the dome to stop rotating

○ By their position on the planetarium floor

○ By orienting themselves to the stars in the artificial night sky

○ By navigating randomly until they found the correct orientation

11. Which of the following best describes the author's presentation of information in the passage?

○ A number of experiments are described to support the idea that birds use the Sun and the night sky to navigate.

○ The author uses logic to show that the biological clock in birds is inaccurate.

○ A structured argument about the importance of internal versus external cues for navigation is presented.

○ The opposing points of view about bird migration are clarified through the study of contrasting experiments.

Paragraph 7：There is accumulating evidence indicating that birds navigate by using a wide variety of environmental cues. Other areas under investigation include magnetism, landmarks, coastlines, sonar, and even smells. The studies are complicated by the fact that the data are sometimes contradictory and the mechanisms apparently change from time to time. Furthermore, one sensory ability may back up another.

12. The word accumulating in the passage is closest in meaning to

○ new

○ increasing

○ convincing

○ extensive

Paragraph 4：So, in another set of experiments, Kramer put identical food boxes around the cage, with food in only one of the boxes. ■The boxes were stationary, and the one containing food was always at the same point of the

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compass. ■However, its position with respect to the surroundings could be changed by revolving either the inner cage containing the birds or the outer walls, which served as the background. ■As long as the birds could see the Sun, no matter how their surroundings were altered, they went directly to the correct food box. ■Whether the box appeared in front of the right wall or the left wall, they showed no signs of confusion. On overcast days, however, the birds were disoriented and had trouble locating their food box.In experimenting with artificial suns, Kramer made another interesting discovery. If the artificial Sun remained stationary, the birds would shift their direction with respect to it at a rate of about 15 degrees per hour, the Sun's rate of movement across the sky. Apparently, the birds were assuming that the "Sun" they saw was moving at that rate. When the real Sun was visible, however, the birds maintained a constant direction as it moved across the sky. In other words, they were able to compensate for the Sun's movement. This meant that some sort of biological clock was operating-and a very precise clock at that.

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

He arranged the feed boxes at various positions on a compass.

Where would the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer that

express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

Gustave Kramer conducted important research related to the ability of birds to orient and navigate.

●

●

●

Answer Choices

○ Because caged birds become disoriented when the sky is overcast, Kramer hypothesized that birds orient themselves according to the Sun's position.

○ In one set of experiments. Kramer placed the box containing food at the same point of the compass each time he put food boxes in the birds' environment.

○ Kramer demonstrated that an internal biological clock allows starlings to compensate for the Sun's movement.

○ After several studies. Kramer surmised that an internal biological clock allows some species of birds to navigate at night

○ The role of environmental cues in birds' navigation is clear, for on overcast days, birds use objects besides the Sun to orient themselves.

○ Kramer showed that night-migrating birds use the sky to navigate by the stars.

参考答案：

1. ○3

2. ○3

3. ○4

4. ○1

5. ○2

6. ○3

7. ○2

8.○1

9. ○1

10. ○3

11. ○1

12. ○2

13. ○1

14. ○1, 3, 6

参考译文

定位和导航

在南美，知更鸟每年春天都会飞往北方。而在北美，知更鸟每个冬天又都会往南飞。而且，他们会飞往几个固定的位于南美的地方，然后在第二年春年又会回到在北美原来的那些树上。问题是他们为什么会在寒冷的冬天离开，然后又是怎样找到迁徙的路径的。这个问题困扰了人们很久，直到 1950 年，一个叫做 Gustave Kramer 的德国科学家回答了这个问题。但同时，又提出新的问题。

Kramer 提出了新的重要的关于动物如何定位和航行的研究。定位就是面朝正确的方向，航行包括了找到从 A 点到 B 点的路径。

在这些研究的早期，Kramer 发现被关在笼子里有迁徙习惯的鸟在他们往常在野外应该开始迁徙的时候变得好动。而且，他注意到，当这些鸟在笼子里躁动不安时，他们通常将自己推向通常的迁徙路径的方向。他于是将星椋鸟关在笼子里做实验，然后发现了他们的方向。事实上，他们有在适当的迁徙方向，除了天空布满云彩德时候，因为这个时候往往使得他们的骚动不安的活动没有了清楚地方向指向。因此，Kramer 猜测道，他们时通过太阳的方位来确定方向的。为了验证这个猜想，他蒙住他们的眼睛并且用镜子改变太阳的自然方位。他发现，在这种环境下，这些鸟按照新的太阳来定位。似乎他们把太阳作为一个罗盘来决定他们的方向。在那个时候，这种猜想看上去是荒谬的，当我们中的一些

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在有地图的情况下都会走失他们又怎么能够用太阳进行导航呢？显而易见的，接下来会有更多的实验。

所以，在另外一组试验中，Kramer 在鸟笼周围放置了相同的餐盒，但是只有一个餐盒中有食物。这些餐盒是静止的，装有食物的那个餐盒始终在罗盘的同一个地点。但是，这个点会由于周围的环境而发生相对改变，那就是既可以通过旋转装有鸟的内部笼子或者旋转作为背景的外墙。只要这些鸟可以看见太阳，无论他们身处的环境如何变化，他们都为径直找到那个正确的餐盒。无论这些盒子是在左墙还是右墙前方，他们都没有表现出迷惑的样子。但是，在阴天，他们就不能定位并且有困难发现盛有食物的餐盒。

在关于人造太阳的试验中，Kramer 又有一些有意思的法相。如果人工太阳保持静止，这些鸟会每小时以 15° 的速度去改变他们的方向，这个速度正是太阳在天空中运动的速度。显然，这些鸟认为他们所看见的“太阳”是按照这个速度移动的。但是，当看见真正的太阳时，这些鸟保持了连贯的方向，正如太阳在天空中移动一样。也就是说，他们可以适应太阳的运动。这就意味着，有一种非常精准的生物钟在起着作用。

那些在夜晚迁徙的鸟又是怎样的呢？也许他们通过夜晚的天空来航行。为了验证这个猜想，这些在夜晚迁徙的鸟被关进笼子里，并在他们的迁徙期放置在一个天文馆里。这个天文馆是一个具有穹顶状的天花板的剧场，并且这些天花板可以放映出一年中任何夜晚的样子。当天文馆的屋顶与外

面的天空相吻合时，这些鸟就会朝着往常迁徙的方向振翅。但是当这个圆屋顶旋转的时候，这些鸟改变方向以适应这个人造天空。这就清楚地表明这些鸟是通过星星来进行方向定位的。

这些不断积累的证据表明鸟是通过非常多的外界环境信息来引导他们的航行的。包括磁场、里程碑、海岸性、声波甚至气味也同样被作为实验对象进行观察。由于这些数据常常是相反的并且磁场经常随着时间的改变而改变的事实，使得这些研究非常的复杂。此外，一种知觉能力可能会支持另一种。

Begging by Nestlings

Many signals that animals make seem to impose on the signalers costs that are overly damaging. A classic example is noisy begging by nestling songbirds when a parent returns to the nest with food. These loud cheeps and peeps might give the location of the nest away to a listening hawk or raccoon, resulting in the death of the defenseless nestlings. In fact, when tapes of begging tree swallows were played at an artificial swallow nest containing an egg, the egg in that “noisy” nest was taken or destroyed by predators before the egg in a nearby quiet nest in 29 of 37 trials.

Further evidence for the costs of begging comes from a study of differences in the begging calls of warbler species that nest on the ground versus those that nest in the relative safety of trees. The young of ground-nesting warblers produce begging cheeps of higher frequencies than do their tree-nesting relatives. These higher-frequency sounds do not travel as far, and so may better conceal the individuals producing them, who are especially vulnerable to predators in their ground nests. David Haskell created artificial nests with clay eggs and placed them on the ground beside a tape recorder that played the begging calls of either tree-nesting or of ground-nesting warblers. The eggs “advertised” by the tree-nesters' begging calls were found bitten significantly more often than the eggs associated with the ground-nesters' calls.

The hypothesis that begging calls have evolved properties that reduce their potential for attracting predators yields a prediction: baby birds of species that experience high rates of nest predation should produce softer begging signals of higher frequency than nestlings of other species less often victimized by nest predators. This prediction was supported by data collected in one survey of 24 species from an Arizona forest, more evidence that predator pressure favors the evolution of begging calls that are hard to detect and pinpoint.

Given that predators can make it costly to beg for food, what benefit do begging nestlings derive from their communications? One possibility is that a noisy baby bird provides accurate signals of its real hunger and good health, making it worthwhile for the listening parent to give it food in a nest where several other offspring are usually available to be fed. If this hypothesis is true, then it follows that nestlings should adjust the intensity of their signals in relation to the signals produced by their nestmates, who are competing for parental attention. When experimentally deprived baby robins are placed in a nest with normally fed siblings, the hungry nestlings beg more loudly than usual—but so do their better-fed siblings, though not as loudly as the hungrier birds.

If parent birds use begging intensity to direct food to healthy offspring capable of vigorous begging, then parents should make food delivery decisions on the basis of their offsprings calls. Indeed, if you take baby tree swallows out of a nest for an hour feeding half the set and starving the other half, when the birds are replaced in

the nest, the starved youngsters beg more loudly than the fed birds, and the parent birds feed the active beggars more than those who beg less vigorously.

As these experiments show, begging apparently provides a signal of need that parents use to make judgments about which offspring can benefit most from a feeding. But the question arises, why don't nestlings beg loudly when they aren't all that hungry? By doing so, they could possibly secure more food, which should result in more rapid growth or larger size, either of which is advantageous. The answer lies apparently not in the increased energy costs of exaggerated begging—such energy costs are small relative to the potential gain in calories—but rather in the damage that any successful cheater would do to its siblings, which share genes with one another. An individual's success in propagating his or her genes can be affected by more than just his or her own personal reproductive success. Because close relatives have many of the same genes, animals that harm their close relatives may in effect be destroying some of their own genes. Therefore, a begging nestling that secures food at the expense of its siblings might actually leave behind fewer copies of its genes overall than it might otherwise.

Paragraph 1：Many signals that animals make seem to impose on the signalers costs that are overly damaging. A classic example is noisy begging by nestling songbirds when a parent returns to the nest with food. These loud cheeps and peeps might give the location of the nest away to a listening hawk or raccoon,

resulting in the death of the defenseless nestlings. In fact, when tapes of begging tree swallows were played at an artificial swallow nest containing an egg, the egg in that "noisy" nest was taken or destroyed by predators before the egg in a nearby quiet nest in 29 of 37 trials.

1. The phrase impose on in the passage is closest in meaning to

○ increase for

○ remove from

○ place on

○ distribute to

2. According to paragraph 1, the experiment with tapes of begging tree swallows establishes which of the following?

○ Begging by nestling birds can attract the attention of predators to the nest.

○ Nest predators attack nests that contain nestlings more frequently than they attack nests that contain only eggs

○ Tapes of begging nestlings attract predators to the nest less frequently than real begging calls do.

○ Nest predators have no other means of locating bird nests except the begging calls of nestling birds.

Paragraph 2: Further evidence for the costs of begging comes from a study of

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differences in the begging calls of warbler species that nest on the ground versus those that nest in the relative safety of trees. The young of ground-nesting warblers produce begging cheeps of higher frequencies than do their tree-nesting relatives. These higher-frequency sounds do not travel as far, and so may better conceal the individuals producing them, who are especially vulnerable to predators in their ground nests. David Haskell created artificial nests with clay eggs and placed them on the ground beside a tape recorder that played the begging calls of either tree-nesting or of ground-nesting warblers. The eggs “advertised” by the tree-nesters' begging calls were found bitten significantly more often than the eggs associated with the ground-nesters' calls.

3. The word artificial in the passage is closest in meaning to

- ○ attractive
- ○ not real
- ○ short-term
- ○ well designed

4. Paragraph 2 indicates that the begging calls of tree nesting warblers

- ○ put them at more risk than ground-nesting warblers experience
- ○ can be heard from a greater distance than those of ground-nesting warblers
- ○ are more likely to conceal the signaler than those of ground-nesting warblers

○ have higher frequencies than those of ground nesting warblers

5. The experiment described in paragraph 2 supports which of the following conclusions?

○ Predators are unable to distinguish between the begging cheeps of ground-nesting and those of tree-nesting warblers except by the differing frequencies of the calls.

○ When they can find them, predators prefer the eggs of tree-nesting warblers to those of ground-nesting warblers.

○ The higher frequencies of the begging cheeps of ground-nesting warblers are an adaptation to the threat that ground-nesting birds face from predators

○ The danger of begging depends more on the frequency of the begging cheep than on how loud it is.

Paragraph 3：The hypothesis that begging calls have evolved properties that reduce their potential for attracting predators yields a prediction: baby birds of species that experience high rates of nest predation should produce softer begging signals of higher frequency than nestlings of other species less often victimized by nest predators. This prediction was supported by data collected in one survey of 24 species from an Arizona forest, more evidence that predator pressure favors the evolution of begging calls that are hard to detect and pinpoint.

6. The word prediction in the passage is closest in meaning to

- ○ surprise
- ○ discovery
- ○ explanation
- ○ expectation

7. The word pinpoint in the passage is closest in meaning to

- ○ observe
- ○ locate exactly
- ○ copy accurately
- ○ recognize

Paragraph 4：Given that predators can make it costly to beg for food, what benefit do begging nestlings derive from their communications? One possibility is that a noisy baby bird provides accurate signals of its real hunger and good health, making it worthwhile for the listening parent to give it food in a nest where several other offspring are usually available to be fed. If this hypothesis is true, then it follows that nestlings should adjust the intensity of their signals in relation to the signals produced by their nestmates, who are competing for parental attention. When experimentally deprived baby robins are placed in a nest with normally fed siblings, the hungry nestlings beg more loudly than usual—but so do their better-fed siblings, though not as loudly as the hungrier birds.

8. The word derive in the passage is closest in meaning to

- ○ require
- ○ gain
- ○ use
- ○ produce

Paragraph 4：Given that predators can make it costly to beg for food, what benefit do begging nestlings derive from their communications? One possibility is that a noisy baby bird provides accurate signals of its real hunger and good health, making it worthwhile for the listening parent to give it food in a nest where several other offspring are usually available to be fed. If this hypothesis is true, then it follows that nestlings should adjust the intensity of their signals in relation to the signals produced by their nestmates, who are competing for parental attention. When experimentally deprived baby robins are placed in a nest with normally fed siblings, the hungry nestlings beg more loudly than usual—but so do their better-fed siblings, though not as loudly as the hungrier birds.

Paragraph 5：If parent birds use begging intensity to direct food to healthy offspring capable of vigorous begging, then parents should make food delivery decisions on the basis of their offsprings calls. Indeed, if you take baby tree swallows out of a nest for an hour feeding half the set and starving the other half, when the birds are replaced in the nest, the starved youngsters beg more loudly than the fed birds, and the parent birds feed the active beggars more than those who beg less vigorously.

9. In paragraphs 4 and 5, what evidence supports the claim that the intensity of nestling begging calls is a good indicator of which offspring in a nest would most benefit from a feeding?

○ When placed in a nest with hungry robins, wellfed robins did not beg for food.

○ Among robin nestlings, the intensity of begging decreased the more the nestlings were fed.

○ Hungry tree swallow nestlings begged louder than well-fed nestlings in the same nest.

○ Hungry tree swallow nestlings continued to beg loudly until they were fed whereas well-fed nestlings soon stopped begging.

10. It can be inferred from paragraphs 4 and 5 that parent songbirds normally do not feed

○ nestlings that are too weak to beg for food as vigorously as their nestmates

○ more than one hungry nestling during a single visit to the nest

○ offspring that were fed by the parents on the previous visit to the nest

○ nestlings that have been removed and then later put back into their nest

Paragraph 6：As these experiments show, begging apparently provides a signal of need that parents use to make judgments about which offspring can benefit

most from a feeding. But the question arises, why don't nestlings beg loudly when they aren't all that hungry? By doing so, they could possibly secure more food, which should result in more rapid growth or larger size, either of which is advantageous. The answer lies apparently not in the increased energy costs of exaggerated begging—such energy costs are small relative to the potential gain in calories— but rather in the damage that any successful cheater would do to its siblings, which share genes with one another. An individual's success in propagating his or her genes can be affected by more than just his or her own personal reproductive success. Because close relatives have many of the same genes, animals that harm their close relatives may in effect be destroying some of their own genes. Therefore, a begging nestling that secures food at the expense of its siblings might actually leave behind fewer copies of its genes overall than it might otherwise.

11. In paragraph 6, the author compares the energy costs of vigorous begging with the potential gain in calories from such begging in order to

○ explain why begging for food vigorously can lead to faster growth and increased size.

○ explain how begging vigorously can increase an individual’s chance of propagating its own genes

○ point out a weakness in a possible explanation for why nestlings do not always beg vigorously

○ argue that the benefits of vigorous begging outweigh any possible

disadvantages

12. According to paragraph 6, which of the following explains the fact that a well-fed nestling does not beg loudly for more food?

○There is no benefit for a nestling to get more food than it needs to survive.

○By begging loudly for food it does not need, a nestling would unnecessarily expose itself to danger from predators.

○If a nestling begs loudly when it is not truly hungry, then when it is truly hungry its own begging may be drowned out by that of its well-fed siblings.

○More of a nestling's genes will be passed to the next generation if its hungry siblings get enough food to survive.

Paragraph 1：Many signals that animals make seem to impose on the signalers costs that are overly damaging. ■ A classic example is noisy begging by nestling songbirds when a parent returns to the nest with food. ■ These loud cheeps and peeps might give the location of the nest away to a listening hawk or raccoon, resulting in the death of the defenseless nestlings.■ In fact, when tapes of begging tree swallows were played at an artificial swallow nest containing an egg, the egg in that “noisy” nest was taken or destroyed by predators before the egg in a nearby quiet nest in 29 of 37 trials.■

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

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The cheeping provides important information to the parent, but it could also attract the attention of others.

Where would the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

Experiments have shed much light on the begging behaviors of baby songbirds

●

●

●

Answer Choices

○ Songbird species that are especially vulnerable to predators have evolved ways of reducing the dangers associated with begging calls.

○ Songbird parents focus their feeding effort on the nestlings that beg loudest for food.

○ It is genetically disadvantageous for nestlings to behave as if they are really hungry when they are not really hungry.

○ The begging calls of songbird nestlings provide a good example of overly

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damaging cost to signalers of signaling.

○ The success with which songbird nestlings communicate their hunger to their parents is dependent on the frequencies of the nestlings' begging calls.

○ Songbird nestlings have evolved several different ways to communicate the intensity of their hunger to their parents.

参考答案：

1. ○3

2. ○1

3. ○2

4. ○2

5. ○3

6. ○4

7. ○2

8.○2

9. ○3

10. ○1

11. ○3

12. ○4

13. ○2

14. ○1, 2, 3

参考译文

雏鸟的乞食行为

一些动物发出的信号可能会给他们自身带来过份的伤害，一个典型的例子就是鸣禽的雏鸟在它们的父母带着食物归巢时吵闹的乞食行为。这些叽叽喳喳的叫声有时会让巢外的老鹰和浣熊听到并且定位，从而致使毫无抵抗能力的雏鸟丧命。事实上，一个蛋被放在一个假的树燕巢中且附近播放着树燕乞食叫声的录音带时，这个“嘈杂”的巢中的蛋在 39 次试验中有 27 次早于放在安静的巢中的蛋而被食肉动物带走或毁掉。

乞食行为成本更进一步的证据来自与一项关于地面筑巢的黄莺与住在相对安全的树上的黄莺对比的研究。幼年的地面筑巢的黄莺所发出的乞食叫声的频率要高于树上筑巢的黄莺。这种高频的声音不会传播的很远，可以更好的隐藏这些容易受到食肉动物攻击的在地面筑巢的雏鸟。David Haskell 制作了一个盛有泥蛋的假巢并把它分别放在播放地面筑巢和播放筑巢的黄莺的乞食声音的录音机旁。被放在树上筑巢的声音旁的蛋被发现的几率要比被放在地面筑巢的黄莺声音旁的蛋高得多。

一个关于乞食行为的假说认为乞食行为已经进化出了一种降低他们被食肉动物发现的几率的预防机制：这种高被捕食率的种类的幼鸟需要发出比其他被食肉动物较少捕杀的幼鸟更高的频率和更小的叫声。在对亚马逊森林里的 24 个物种进行调查和收集的数据证实了这种预防机制，而更多的证据也表明食肉动物迫使乞食叫声变得难以侦测和定位。

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考虑到食肉动物可以让雏鸟为了得到食物而付出巨大代价，那么到底雏鸟可以从乞食行为这种交流方式中得到什么？一个可能的原因使吵闹的幼鸟可以给出准确的信号：他们很饿而且很健康，这么做是为了让它的父母在与众多同巢的其它可以被喂食的后代中挑选出它作为喂食对象。如果这个假说成立，那么可以推出雏鸟是因为其他与之争抢父母注意的同伴发出的信号而调整它们信号的强度。当实验性的带走的幼年知更鸟并安放在那些正常喂养的同类的巢中，饥饿的雏鸟的乞食行为会比那些正常的要大，但是那些喂养的更好的同类反而叫得不像饥饿的鸟那么响。

如果成鸟是根据乞食的剧烈程度来派发食物给那些健康的更积极乞食的后代，那么父母分配食物的决定就是建立在他们的后代的叫声上的。所以，如果你把一个雏燕带离鸟巢并在一个小时里只喂半饱，当这个雏鸟被放回巢时，这个饿坏了的小家伙会比其他吃饱了的叫得更响，它的父母也会喂它比喂那些乞食不积极的幼鸟更多。

这些实验表明，乞食行为很明显的提供给父母一个用于判断谁可以从喂食中获益更多的需求信号。但是问题又出来了，为什么雏鸟不在它们不饿的时候大声的乞食呢？如果它们这样做了，那就可以保证更多的食物，也就能更快的成长或者拥有更大的体型，怎么说都是有利的。这个问题的答案显然不是在与因为过分乞食而消耗的能量，因为这些损耗的能量对于其潜在能得到的热量来说只是冰山一角——而是因为任何成功的骗子这么

做了的话就会对他们和他们共享基因的同伴产生危害。

一个个体在繁衍中延续他或她的基因所产生的影响要比只是它个人的延续繁衍要成功。因为近亲中有很多相似的基因，动物伤害它们的近亲很可能同时摧毁一些他们自己的自有基因。因此，一只在它的同类吃饱后仍然能保证食物来源以供生存的雏鸟，所保存的基因往往要比另一种单一的办法所延续的基因要多。

Which Hand Did They Use?

We all know that many more people today are right-handed than left-handed. Can one trace this same pattern far back in prehistory? Much of the evidence about right-hand versus left-hand dominance comes from stencils and prints found in rock shelters in Australia and elsewhere, and in many Ice Age caves in France, Spain, and Tasmania. When a left hand has been stenciled, this implies that the artist was right-handed, and vice versa. Even though the paint was often sprayed on by mouth, one can assume that the dominant hand assisted in the operation. One also has to make the assumption that hands were stenciled palm downward—a left hand stenciled palm upward might of course look as if it were a right hand. Of 158 stencils in the French cave of Gargas, 136 have been identified as left, and only 22 as right; right-handedness was therefore heavily predominant.

Cave art furnishes other types of evidence of this phenomenon. Most engravings, for example, are best lit from the left, as befits the work of right-handed artists, who generally prefer to have the light source on the left so that the shadow of their hand does not fall on the tip of the engraving tool or brush. In the few cases where an Ice Age figure is depicted holding something, it is mostly, though not always, in the right hand.

Clues to right-handedness can also be found by other methods. Right-handers tend to have longer, stronger, and more muscular bones on the

right side, and Marcellin Boule as long ago as 1911 noted the La Chapel le-aux-Saints Neanderthal skeleton had a right upper arm bone that was noticeably stronger than the left. Similar observations have been made on other Neanderthal skeletons such as La Ferrassie I and Neanderthal itself.

Fractures and other cut marks are another source of evidence. Right-handed soldiers tend to be wounded on the left. The skeleton of a 40- or 50-year-old Nabatean warrior, buried 2,000 years ago in the Negev Desert, Israel, had multiple healed fractures to the skull, the left arm, and the ribs.

Tools themselves can be revealing. Long-handed Neolithic spoons of yew wood preserved in Alpine villages dating to 3000 B.C. have survived; the signs of rubbing on their left side indicate that their users were right-handed. The late Ice Age rope found in the French cave of Lascaux consists of fibers spiraling to the right, and was therefore tressed by a righthander.

Occasionally one can determine whether stone tools were used in the right hand or the left, and it is even possible to assess how far back this feature can be traced. In stone toolmaking experiments, Nick Toth, a right-hander, held the core (the stone that would become the tool) in his left hand and the hammer stone in his right. As the tool was made, the core was rotated clockwise, and the flakes, removed in sequence, had a little crescent of cortex (the core's outer surface) on the side. Toth's knapping produced 56 percent flakes with the cortex on the right, and 44 percent

left-oriented flakes. A left-handed toolmaker would produce the opposite pattern Toth has applied these criteria to the similarly made pebble tools from a number of early sites (before 1.5 million years) at Koobi For a, Kenya, probably made by Homo habilis. At seven sites he found that 57 percent of the flakes were right-oriented, and 43 percent left, a pattern almost identical to that produced today.

About 90 percent of modern humans are right-handed: we are the only mammal with a preferential use of one hand. The part of the brain responsible for fine control and movement is located in the left cerebral hemisphere, and the findings above suggest that the human brain was already asymmetrical in its structure and function not long after 2 million years ago. Among Neanderthalers of 70,000 – 35,000 years ago, Marcellin Boule noted that the La Chapelle-aux-Saints individual had a left hemisphere slightly bigger than the right, and the same was found for brains of specimens from Neanderthal, Gibraltar, and La Quina.

Paragraph 1：We all know that many more people today are right-handed than left-handed. Can one trace this same pattern far back in prehistory? Much of the evidence about right-hand versus left-hand dominance comes from stencils and prints found in rock shelters in Australia and elsewhere, and in many Ice Age caves in France, Spain, and Tasmania. When a left hand has been stenciled, this

implies that the artist was right-handed, and vice versa. Even though the paint was often sprayed on by mouth, one can assume that the dominant hand assisted in the operation. One also has to make the assumption that hands were stenciled palm downward—a left hand stenciled palm upward might of course look as if it were a right hand. Of 158 stencils in the French cave of Gargas, 136 have been identified as left, and only 22 as right; right-handedness was therefore heavily predominant.

1. The phrase assisted in in the passage is closest in meaning to

○ initiated

○ dominated

○ helped with

○ setup

2. It can be inferred from paragraph 1 that even when paint was sprayed by mouth to make a hand stencil

○ there was no way to tell which hand was stenciled

○ the stenciled hand was the weaker hand

○ the stenciled hand was the dominant hand

○ artists stenciled more images of the dominant hand than they did of the weak

Paragraph 2：Cave art furnishes other types of evidence of this

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phenomenon. Most engravings, for example, are best lit from the left, as befits the work of right-handed artists, who generally prefer to have the light source on the left so that the shadow of their hand does not fall on the tip of the engraving tool or brush. In the few cases where an Ice Age figure is depicted holding something, it is mostly, though not always, in the right hand.

3. The phrase depicted in the passage is closest in meaning to

- ○ identified
- ○ revealed
- ○ pictured
- ○ imagined

4. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

- ○ Right-handed artists could more easily have avoided casting shadows on their work, because engravings in prehistoric caves were lit from the left.
- ○ The tips of engraving tools and brushes indicate that these instruments were used by right-handed artists whose work was lit from the left.
- ○ The best lighting for most engravings suggests that they were made by right-handed people trying to avoid the shadow of their hands interfering with their work.
- ○ Right-handed artists try to avoid having the brush they are using interfere

with the light source.

Paragraph 1：We all know that many more people today are right-handed than left-handed. Can one trace this same pattern far back in prehistory? Much of the evidence about right-hand versus left-hand dominance comes from stencils and prints found in rock shelters in Australia and elsewhere, and in many Ice Age caves in France, Spain, and Tasmania. When a left hand has been stenciled, this implies that the artist was right-handed, and vice versa. Even though the paint was often sprayed on by mouth, one can assume that the dominant hand assisted in the operation. One also has to make the assumption that hands were stenciled palm downward—a left hand stenciled palm upward might of course look as if it were a right hand. Of 158 stencils in the French cave of Gargas, 136 have been identified as left, and only 22 as right; right-handedness was therefore heavily predominant.

Paragraph 2：Cave art furnishes other types of evidence of this phenomenon. Most engravings, for example, are best lit from the left, as befits the work of right-handed artists, who generally prefer to have the light source on the left so that the shadow of their hand does not fall on the tip of the engraving tool or brush. In the few cases where an Ice Age figure is depicted holding something, it is mostly, though not always, in the right hand.

5. All of the following are mentioned in paragraphs 1 and 2 as evidence of right-handedness in art and artists EXCEPT

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- ○ the ideal source of lighting for most engravings
- ○ the fact that a left hand stenciled palm upward might look like a right hand
- ○ the prevalence of outlines of left hands
- ○ figures in prehistoric art holding objects with the right hand

Paragraph 3：Clues to right-handedness can also be found by other methods. Right-handers tend to have longer, stronger, and more muscular bones on the right side, and Marcellin Boule as long ago as 1911 noted the La Chapel le-aux-Saints Neanderthal skeleton had a right upper arm bone that was noticeably stronger than the left. Similar observations have been made on other Neanderthal skeletons such as La Ferrassie I and Neanderthal itself.

6. According to paragraph 3, the La Chapelle-aux-Saints Neanderthal skeleton can be identified as right-handed because

- ○ other Neanderthal skeletons found nearby are also right-handed
- ○ the right arm bone is stronger than the left
- ○ it is similar to skeletons of La Ferrassie I and Neanderthal
- ○ the right side of the skeleton shows less evidence of fractures

Paragraph 4：Fractures and other cut marks are another source of evidence. Right-handed soldiers tend to be wounded on the left. The skeleton of a 40- or 50-year-old Nabatean warrior, buried 2,000 years ago in the Negev Desert, Israel, had multiple healed fractures to the skull, the left arm, and the ribs.

7. Which of the following statements about fractures and cut marks can be inferred from paragraph 4?

○ Fractures and cut marks caused by right-handed soldiers tend to occur on the right side of the injured party's body.

○ The right arm sustains more injuries because, as the dominant arm, it is used more actively.

○ In most people, the left side of the body is more vulnerable to injury since it is not defended effectively by the dominant arm.

○ Fractures and cut marks on fossil humans probably occurred after death.

Paragraph 5：Tools themselves can be revealing. Long-handed Neolithic spoons of yew wood preserved in Alpine villages dating to 3000 B.C. have survived; the signs of rubbing on their left side indicate that their users were right-handed. The late Ice Age rope found in the French cave of Lascaux consists of fibers spiraling to the right, and was therefore tressed by a righthander.

8. According to paragraph 5, what characteristic of a Neolithic spoon would imply that the spoon's owner was right-handed?

○ The direction of the fibers

○ Its long handle

○ The yew wood it is carved from

○ Wear on its left side

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9. In paragraph 5, why does the author mention the Ice Age rope found in the French cave of Lascaux?

○ As an example of an item on which the marks of wear imply that it was used by a right-handed person

○ Because tressing is an activity that is easier for a right-handed person than for a left-handed person

○ Because the cave of Lascaux is the site where researchers have found several prehistoric tools made for right-handed people

○ As an example of an item whose construction shows that it was right handed made by a right-person

Paragraph 6：Occasionally one can determine whether stone tools were used in the right hand or the left, and it is even possible to assess how far back this feature can be traced. In stone toolmaking experiments, Nick Toth, a right-hander, held the core (the stone that would become the tool) in his left hand and the hammer stone in his right. As the tool was made, the core was rotated clockwise, and the flakes, removed in sequence, had a little crescent of cortex (the core's outer surface) on the side. Toth's knapping produced 56 percent flakes with the cortex on the right, and 44 percent left-oriented flakes. A left-handed toolmaker would produce the opposite pattern Toth has applied these criteria to the similarly made pebble tools from a number of early sites (before 1.5 million years) at Koobi For a, Kenya, probably made by Homo habilis. At seven sites he found that 57 percent of the

flakes were right-oriented, and 43 percent left, a pattern almost identical to that produced today.

10. The word criteria in the passage is closest in meaning to

- ○ standards
- ○ findings
- ○ ideas
- ○ techniques

11. What was the purpose of Toth's tool making experiment described in paragraph 6?

- ○ To shape tools that could be used by either hand
- ○ To produce replicas of early tools for display in museums
- ○ To imitate the production of pebble tools from early sites
- ○ To determine which hand made the early tools

Paragraph 7：About 90 percent of modern humans are right-handed: we are the only mammal with a preferential use of one hand. The part of the brain responsible for fine control and movement is located in the left cerebral hemisphere, and the findings above suggest that the human brain was already asymmetrical in its structure and function not long after 2 million years ago. Among Neanderthalers of 70,000 – 35,000 years ago, Marcellin Boule noted that the La Chapelle-aux-Saints individual had a left hemisphere slightly bigger than the

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right, and the same was found for brains of specimens from Neanderthal, Gibraltar, and La Quina.

12. What is the author's primary purpose in paragraph 7?

○ To illustrate the importance of studying the brain

○ To demonstrate that human beings are the only mammal to desire fine control of movement

○ To contrast the functions of the two hemispheres of the brain

○ To demonstrate that right-hand preference has existed for a long time

Paragraph 1：We all know that many more people today are right-handed than left-handed. Can one trace this same pattern far back in prehistory? ■Much of the evidence about right-hand versus left-hand dominance comes from stencils and prints found in rock shelters in Australia and elsewhere, and in many Ice Age caves in France, Spain, and Tasmania. ■When a left hand has been stenciled, this implies that the artist was right-handed, and vice versa. ■Even though the paint was often sprayed on by mouth, one can assume that the dominant hand assisted in the operation. One also has to make the assumption that hands were stenciled palm downward—a left hand stenciled palm upward might of course look as if it were a right hand. ■Of 158 stencils in the French cave of Gargas, 136 have been identified as left, and only 22 as right; right-handedness was therefore heavily predominant.

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

The stencils of hands found in these shelters and caves allow us to draw conclusions about which hand was dominant.

Where would the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

Several categories of evidence indicate that people have always been predominantly right-handed

●

●

●

Answer Choices

○Stencils of right-handed figures are characteristic of cave art in France. Spain, and Tasmania.

○Signs on the skeletal remains of prehistoric figures, including arm-bone size and injury marks, imply that these are the remains of right-handed people.

○Instruments such as spoons, ropes, and pebble tools show signs that

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indicate they were used or constructed by right-handed people.

○The amount of prehistoric art created by right-handed artists indicates that left-handed people were in the minority.

○Neanderthal skeletons often have longer finger bones in the right hand, which is evidence that the right hand was stronger.

○Nick Toth, a modem right-handed toolmaker. has shown that prehistoric tools were knapped to fit the right hand

参考答案：

1. ○3

2. ○2

3. ○3

4. ○3

5. ○2

6. ○2

7. ○3

8.○4

9. ○4

10. ○1

11. ○4

12. ○4

13. ○2

14. ○2, 3, 4

参考译文

他们到底用哪只手？

我们都知道，活在当下的人们更多是使用右手而非左手。能不能在史前查找出这一相似的性状呢？有太多的来自澳大利亚地区的石屋中模板和字迹以及冰河期法国西班牙以及塔斯马尼亚地区的岩洞上搜集到的证据证明右手较之于左手的优势。当一个左手被用于塑模时就反向暗示了制作他的工匠惯于使用右手。即使是制作一幅画作需要一个月左右的喷涂，也可以想象惯用手是如何在这一过程中起到协助作用的。另一个假设是被用于塑模的手手掌向下-一只左手塑模朝上也许让它看起来像一只右手。在法国 Gargas 岩洞中的 158 个模板中，有 136 个鉴定确认为左手，只有 22 个是右手；右手习惯毫无疑问是据绝对主导地位的。

岩洞艺术的其他形式也为这一现象提供了依据。例如大多数的雕版都是左起的光照最好，因为是配合惯用右手的工匠的工作，他们经常喜欢让光线从左边照过来以便他们手的影子不会投射在雕板工具或是刷子的末端。很多冰河时期的雕塑都被雕刻为拿着一些物品的摸样，尽管不是绝对的，但是起码大多数都是放在右手上。

其他方法也能理出右手使用习惯的线索。右撇子的右侧身体会趋于更长，更壮，更多肌肉的骨骼。Marcellin Boule 早在 1911 提到的尼安德特人的骨架有一个右侧上肢骨骼要明显强壮与左侧。对其他尼安德特人的骨架也曾做过类似的调查，例如 la Ferrassie 和尼安德特人本族的族人。

断痕与割痕也是论据的另一来源。右撇子勇士一般都是左侧容易受伤。在内盖

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夫的戈壁中被埋了 2000 多年的一个 40-50 岁之间的 Nabatean 勇士的骨架，在他的头部，左臂和肋骨上有多处已愈合的伤痕。

工具的本身也会反映这一现象。长条型新石器时代的紫杉木质勺子从史前 3000 年一直完好的保存到现在。在它左侧的磨痕证明了他们的主人惯用右手。在法国的拉克斯岩洞艺术找到的晚石器时代的绳子是由向右旋转的纤维捆成的，当然也就证实了出自右撇子之手。

偶尔也能确定石器是左手适用还是右手使用，甚至可以查出这些特征是在多远的过去被留下的。在石器制造试验中，Nick toth,一个右撇子用左手拿着一个石胚（就是一块是要成为工具的石头）同时用右手抡锤。由于工具的作用，胚子顺时针的旋转的同时，小碎片一点点的去掉，在一侧留下月牙状的表层（石头胚子的表面）。Toth’s 的敲打产生的碎痕百分之 56 留在了右侧的表面，百分之 44 留在了左侧朝向的碎痕。一个左撇子工匠则会生产出相反的花纹，Toth 将这种标准对照到数个在 Kombi Fora（距今一百五十万年前）发现的类似卵石工具上，他在七个地点找到的百分之 57 的碎痕是右侧朝向，而百分之 47 是左侧朝向，就和今天我们所生产的花纹一样。

大约百分之九十的现代人是右撇子；我们都是只是优先使用一只手的哺乳动物。大脑负责良好的控制行动的区域位于脑部的左半球，这也证明的人类大脑的机构和功能上的不对称性在两百万年前就已经定型了。在距今 70000 到 35000 年的尼安德特人中，Marcellin Boule 发现 La Chapelle-aux-Saints（某人种吧）的个体的左脑半球稍微比右边大一点，与之类似的也被发现在尼安德特人，直布罗陀人和拉昆尼亚

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人种的脑型中

Transition to Sound in Film

The shift from silent to sound film at the end of the 1920s marks, so far, the most important transformation in motion picture history. Despite all the highly visible technological developments in theatrical and home delivery of the moving image that have occurred over the decades since then, no single innovation has come close to being regarded as a similar kind of watershed. In nearly every language, however the words are phrased, the most basic division in cinema history lies between films that are mute and films that speak.

Yet this most fundamental standard of historical periodization conceals a host of paradoxes. Nearly every movie theater, however modest, had a piano or organ to provide musical accompaniment to silent pictures. In many instances, spectators in the era before recorded sound experienced elaborate aural presentations alongside movies' visual images, from the Japanese benshi (narrators) crafting multivoiced dialogue narratives to original musical compositions performed by symphony-size orchestras in Europe and the United States. In Berlin, for the premiere performance outside the Soviet Union of The Battleship Potemkin, film director Sergei Eisenstein worked with Austrian composer Edmund Meisel (1874-1930) on a musical score matching sound to image; the Berlin screenings with live music helped to bring the film its wide international fame.

Beyond that, the triumph of recorded sound has overshadowed the rich

diversity of technological and aesthetic experiments with the visual image that were going forward simultaneously in the 1920s. New color processes, larger or differently shaped screen sizes, multiple-screen projections, even television, were among the developments invented or tried out during the period, sometimes with startling success. The high costs of converting to sound and the early limitations of sound technology were among the factors that suppressed innovations or retarded advancement in these other areas. The introduction of new screen formats was put off for a quarter century, and color, though utilized over the next two decades for special productions, also did not become a norm until the 1950s.

Though it may be difficult to imagine from a later perspective, a strain of critical opinion in the 1920 s predicted that sound film would be a technical novelty that would soon fade from sight, just as had many previous attempts, dating well back before the First World War, to link images with recorded sound. These critics were making a common assumption—that the technological inadequacies of earlier efforts (poor synchronization, weak sound amplification, fragile sound recordings) would invariably occur again. To be sure, their evaluation of the technical flaws in 1920 s sound experiments was not so far off the mark, yet they neglected to take into account important new forces in the motion picture field that, in a sense, would not take no for an answer.

These forces were the rapidly expanding electronics and telecommunications companies that were developing and linking telephone and wireless technologies

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in the 1920s. In the United States, they included such firms as American Telephone and Telegraph. General Electric, and Westinghouse They were interested in all forms of sound technology and all potential avenues for commercial exploitation.

Their competition and collaboration were creating the broadcasting industry in the United States, beginning with the introduction of commercial radio programming in the early 1920s. With financial assets considerably greater than those in the motion picture industry, and perhaps a wider vision of the relationships among entertainment and communications media, they revitalized research into recording sound for motion pictures. In 1929 the United States motion picture industry released more than 300 sound films—a rough figure, since a number were silent films with music tracks, or films prepared in dual versions, to take account of the many cinemas not yet wired for sound. At the production level, in the United States the conversion was virtually complete by 1930. In Europe it took a little longer, mainly because there were more small producers for whom the costs of sound were prohibitive, and in other parts of the world problems with rights or access to equipment delayed the shift to sound production for a few more years (though cinemas in major cities may have been wired in order to play foreign sound films). The triumph of sound cinema was swift, complete, and enormously popular.

Paragraph 1：The shift from silent to sound film at the end of the 1920s marks, so far, the most important transformation in motion picture history. Despite all the highly visible technological developments in theatrical and home delivery of the moving image that have occurred over the decades since then, no single innovation has come close to being regarded as a similar kind of watershed. In nearly every language, however the words are phrased, the most basic division in cinema history lies between films that are mute and films that speak.

1. The word regarded in the passage is closest in meaning to

○analyzed

○considered

○altered

○criticized

2. According to paragraph 1, which of the following is the most significant development in the history of film?

○The technological innovation of sound film during the 1920s

○The development of a technology for translating films into other languages

○To argue that dams should not be built on the Euphrates River

○The technological improvements allowing clearer images in films

Paragraph 2：Yet this most fundamental standard of historical periodization conceals a host of paradoxes. Nearly every movie theater, however modest, had a

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piano or organ to provide musical accompaniment to silent pictures. In many instances, spectators in the era before recorded sound experienced elaborate aural presentations alongside movies' visual images, from the Japanese benshi (narrators) crafting multivoiced dialogue narratives to original musical compositions performed by symphony-size orchestras in Europe and the United States. In Berlin, for the premiere performance outside the Soviet Union of The Battleship Potemkin, film director Sergei Eisenstein worked with Austrian composer Edmund Meisel (1874-1930) on a musical score matching sound to image; the Berlin screenings with live music helped to bring the film its wide international fame.

3. The word paradoxes in the passage is closest in meaning to

○difficulties

○accomplishments

○parallels

○contradictions

4. Why does the author mention Japanese benshi and original musical compositions?

○To suggest that audiences preferred other forms of entertainment to film before the transition to sound inthe1920's

○To provide examples of some of the first sounds that were recorded for film.

○To indicate some ways in which sound accompanied film before the

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innovation of sound films in the late 1920s

○To show how the use of sound in films changed during different historical periods

5. Paragraph 2 suggests which of the following about Eisenstein's film The Battleship Potemkirf?

○The film was not accompanied by sound before its Berlin screening.

○The film was unpopular in the Soviet Union before it was screened in Berlin.

○Eisenstein's film was the first instance of collaboration between a director and a composer.

○Eisenstein believed that the musical score in a film was as important as dialogue.

Paragraph 3：Beyond that, the triumph of recorded sound has overshadowed the rich diversity of technological and aesthetic experiments with the visual image that were going forward simultaneously in the 1920s. New color processes, larger or differently shaped screen sizes, multiple-screen projections, even television, were among the developments invented or tried out during the period, sometimes with startling success. The high costs of converting to sound and the early limitations of sound technology were among the factors that suppressed innovations or retarded advancement in these other areas. The introduction of new screen formats was put off for a quarter century, and color, though utilized over the next two decades for special productions, also did not become a norm until the

1950s.

6. The word overshadowed in the passage is closest in meaning to

○distracted from

○explained

○conducted

○coordinated with

7. According to paragraph 3, which of the following is NOT true of the technological and aesthetic experiments of the 1920's?

○Because the costs of introducing recorded sound were low, it was the only innovation that was put to use inthe1920's.

○The introduction of recorded sound prevented the development of other technological innovations in the 1920's

○The new technological and aesthetic developments of the 1920s included the use of color, new screen formats, and television.

○Many of the innovations developed in the 1920s were not widely introduced until as late as the 1950's.

Paragraph 4：Though it may be difficult to imagine from a later perspective, a strain of critical opinion in the 1920 s predicted that sound film would be a technical novelty that would soon fade from sight, just as had many previous attempts, dating well back before the First World War, to link images with recorded sound. These

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critics were making a common assumption—that the technological inadequacies of earlier efforts (poor synchronization, weak sound amplification, fragile sound recordings) would invariably occur again. To be sure, their evaluation of the technical flaws in 1920 s sound experiments was not so far off the mark, yet they neglected to take into account important new forces in the motion picture field that, in a sense, would not take no for an answer.

8. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○It was difficult for some critics in the 1920s to imagine why the idea of sound film had faded from sight well before the First World War.

○As surprising as it seems today, some critics in the 1920s believed that the new attempts at sound films would fade just as quickly as the attempts made before the First World War.

○Though some early critics thought that sound film would fade, its popularity during the First World War proved that it was not simply a technical novelty.

○Although some critics predicted well before the First World War that sound film would be an important technical innovation, it was not attempted until the 1920s.

9. The word neglected in the passage is closest in meaning to

○failed

○needed

○started

○expected

10. According to paragraph 4, which of the following is true about the technical problems of early sound films?

○Linking images with recorded sound was a larger obstacle than weak sound amplification or fragile sound recordings

○Sound films in the 1920s were unable to solve the technical flaws found in sound films before the First World War.

○Technical inadequacies occurred less frequently in early sound films than critics suggested

○Critics assumed that it would be impossible to overcome the technical difficulties experienced with earlier sound films.

Paragraph 5：These forces were the rapidly expanding electronics and telecommunications companies that were developing and linking telephone and wireless technologies in the 1920s. In the United States, they included such firms as American Telephone and Telegraph. General Electric, and Westinghouse They were interested in all forms of sound technology and all potential avenues for commercial exploitation.

11. In paragraph 5, commercial radio programming is best described as the

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result of

○a financially successful development that enabled large telecommunications firms to weaken their competition.

○the desire of electronics and telecommunications companies to make sound technology profitable.

○a major development in the broadcasting industry that occurred before the 1920s.

○the cooperation between telecommunications companies and the motion picture industry

Paragraph 6：Their competition and collaboration were creating the broadcasting industry in the United States, beginning with the introduction of commercial radio programming in the early 1920s. With financial assets considerably greater than those in the motion picture industry, and perhaps a wider vision of the relationships among entertainment and communications media, they revitalized research into recording sound for motion pictures. In 1929 the United States motion picture industry released more than 300 sound films—a rough figure, since a number were silent films with music tracks, or films prepared in dual versions, to take account of the many cinemas not yet wired for sound. At the production level, in the United States the conversion was virtually complete by 1930. In Europe it took a little longer, mainly because there were more small producers for whom the costs of sound were prohibitive, and in other parts of the world problems with rights or access to equipment delayed the shift to sound production

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for a few more years (though cinemas in major cities may have been wired in order to play foreign sound films). The triumph of sound cinema was swift, complete, and enormously popular.

12. According to paragraph 6, which of the following accounts for the delay in the conversion to sound films in Europe?

○European producers often lacked knowledge about the necessary equipment for the transition to sound films.

○Smaller European producers were often unable to afford to add sound to their films.

○It was often difficult to wire older cinemas in the major cities to play sound films.

○Smaller European producers believed that silent films with music accompaniment were aesthetically superior to sound films.

Paragraph 6：Their competition and collaboration were creating the broadcasting industry in the United States, beginning with the introduction of commercial radio programming in the early 1920s. ■With financial assets considerably greater than those in the motion picture industry, and perhaps a wider vision of the relationships among entertainment and communications media, they revitalized research into recording sound for motion pictures. ■In 1929 the United States motion picture industry released more than 300 sound films—a rough figure, since a number were silent films with music tracks, or films prepared in dual

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versions, to take account of the many cinemas not yet wired for sound. ■At the production level, in the United States the conversion was virtually complete by 1930. ■In Europe it took a little longer, mainly because there were more small producers for whom the costs of sound were prohibitive, and in other parts of the world problems with rights or access to equipment delayed the shift to sound production for a few more years (though cinemas in major cities may have been wired in order to play foreign sound films). The triumph of sound cinema was swift, complete, and enormously popular.

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

When this research resulted in the development of vastly improved sound techniques, film studios became convinced of the importance of converting to sound.

Where would the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

The transition from silent to sound films was the most important development

in film history.

●

●

●

Answer Choices

○Although music and speech had frequently accompanied film presentations before the 1920s, there was a strong desire to add sound to the films themselves.

○Because of intense interest in developing and introducing sound in film, the general use of other technological innovations being developed in the 1920s was delayed.

○The rapid progress in sound technology made possible by the involvement of telecommunications companies transformed the motion picture industry.

○Japanese filmmakers had developed the technology for creating sound films before directors in Europe and the United States began experimenting with sound

○Before the First World War, film directors showed little interest in linking images with recorded sound

○The arrival of sound film technology in the United States forced smaller producers in the motion picture industry out of business.

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参考答案：

1. ○2

2. ○1

3. ○4

4. ○3

5. ○1

6. ○1

7. ○1

8.○2

9. ○1

10. ○4

11. ○2

12. ○2

13. ○2

14. ○1, 2, 3

参考译文

电影声音的演变

电影史上最为重大的一次过渡——电影从无声到有声的跨越发生在1920 年的年底。尽管在戏剧和家庭成像的多元化方面更高级的视觉技术在之前已经发展了十年，依然没有一项类似的发明出现可以被归入这次转折。但是在所有语言中几乎都是这样描述的：电影史上最基本的分水岭就是从默片到电影中语音的加入。

这项历史周期中最基础的的标志性事件却隐藏在一系列的矛盾中。尽管在几乎每家庄重的剧院中，都有一架钢琴或是其他乐器来给无声的画面提供配乐。在一些实例中，录音时代之前的观众都亲历过那种在电影放映画面的同时旁边是复杂的音效呈现，从日本的 benshi(口技)的多点音效的对话演绎到欧洲和美国由管弦交响乐乐队演奏的专门为电影谱写的曲谱。在柏林，为了能在露天公演的关于苏联的波利金战役，该片导演 Sergei Eisenstein 与奥地利的作曲家 Edmund Meisel 合作创作与电影相匹配的音效；柏林的放映电影的同时现场演奏音乐让这种电影形式有了国际影响力。

除此之外,录音的辉煌仍旧被遮挡在视觉呈现的丰富的技术和美学体验类型下直到 1920 年。在这期间充斥着新技术的发明或者提出，有一些甚至取得了成功，新的色彩处理，更大的和不同尺寸的屏幕，多屏放映的设计，甚至是电视。声音转化的高成本和早期声音技术的局限成为了抑制或妨碍了这些发明的在其所在领域的优势。新型屏幕设计的引进被推迟了 25 年，

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彩色，在接下来的 20 年除了用于特殊生产外，一直到 1950 年都还不是标准。

虽然这件在事后很难想象，但是在 1920 年一个倾向性的批判性观点预测有声电影仅仅作为一项新奇的技术将会迅速从视线中退去，就像之前的许多试图将图像与录音连接在一起的尝试一样，而这可以追溯到一战之前。这些批评家都持有一个共同的假设，那就是早期成果的技术缺陷仍将不可避免的发声（较差的同步性，微小的音量和断断续续的录音）。为了证实这个观点，他们在 1920 年的声音试验中所估测的技术缺陷仍然很大，之后他们就不再对这一电影范畴内的重要力量进行考虑了，从某种意义上说，是不再特意的关注结果。

而在 1920 年，这个了力量急速的扩张发展出了连接电话与无线电工艺的电子公司和电子通讯公司。在美国，他们包括了像美国电话与电报这样的公司。通用电器公司，威斯汀豪斯都对声音技术的各种形式和一切商业开发潜力表示感兴趣

在 1920 年的早期，这些竞争与合作开创了美国的广播产业，开始引入了商业广播节目。由于财富贡献明显的比那些电影工业的多，而且他们在娱乐与交互媒体之间的关系上有一个更广的看法，他们重启了电影配音的研究，一个粗略的统计表明，1929 年美国的电影产业放出了超过 300 部有声电影，同时还有一定数量的默片音轨，或者为电影准备两个版本以照顾一些还没有声音部件的电影院。美国在生产环

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节的转换最终完成与 1930 年。欧洲要稍微晚一点更多是因为他们有很多小型的无法负担音效成本的生产商，另一部分原因是对于专利权和许可领域问题而使设备的配备拖延了声音产业的转变很多年（尽管很多大城市的电影院为了播放外国电影可能已经添加了设备）。有声电影取得了胜利，并迅速，完全，广泛的流行起来

Water in the Desert

Rainfall is not completely absent in desert areas, but it is highly variable. An annual rainfall of four inches is often used to define the limits of a desert. The impact of rainfall upon the surface water and groundwater resources of the desert is greatly influenced by landforms. Flats and depressions where water can collect are common features, but they make up only a small part of the landscape.

Arid lands, surprisingly, contain some of the world's largest river systems, such as the Murray-Darling in Australia, the Rio Grande in North America, the Indus in Asia, and the Nile in Africa. These rivers and river systems are known as "exogenous" because their sources lie outside the arid zone. They are vital for sustaining life in some of the driest parts of the world. For centuries, the annual floods of the Nile, Tigris, and Euphrates, for example, has brought fertile silts and water to the inhabitants of their lower valleys. Today, river discharges are increasingly controlled by human intervention, creating a need for international river-basin agreements. The filling of the Ataturk and other dams in Turkey has drastically reduced flows in the Euphrates, with potentially serious consequences for Syria and Iraq.

The flow of exogenous rivers varies with the season. The desert sections of long rivers respond several months after rain has fallen outside the desert, so that peak flows may be in the dry season. This is useful for irrigation, but the high

temperatures, low humidity, and different day lengths of the dry season, compared to the normal growing season, can present difficulties with some crops.

Regularly flowing rivers and streams that originate within arid lands are known as "endogenous." These are generally fed by groundwater springs, and many issue from limestone massifs, such as the Atlas Mountains in Morocco. Basaltic rocks also support springs, notably at the Jabal Al-Arab on the Jordan-Syria border. Endogenous Rivers often do not reach the sea but drain into inland basins, where the water evaporates or is lost in the ground. Most desert streambeds are normally dry, but they occasionally receive large flows of water and sediment.

Deserts contain large amounts of groundwater when compared to the amounts they hold in surface stores such as lakes and rivers. But only a small fraction of groundwater enters the hydrological cycle-feeding the flows of streams, maintaining lake levels, and being recharged (or refilled) through surface flows and rainwater. In recent years, groundwater has become an increasingly important source of freshwater for desert dwellers. The United Nations Environment Programme and the World Bank have funded attempts to survey the groundwater resources of arid lands and to develop appropriate extraction techniques. Such programs are much needed because in many arid lands there is only a vague idea of the extent of groundwater resources. It is known, however, that the distribution of groundwater is uneven, and that much of it lies at great

depths.

Groundwater is stored in the pore spaces and joints of rocks and unconsolidated (unsolidified) sediments or in the openings widened through fractures and weathering. The water-saturated rock or sediment is known as an "aquifer". Because they are porous, sedimentary rocks, such as sandstones and conglomerates, are important potential sources of groundwater. Large quantities of water may also be stored in lime stones when joints and cracks have been enlarged to form cavities. Most limestone and sandstone aquifers are deep and extensive but may contain ground waters that are not being recharged. Most shallow aquifers in sand and gravel deposits produce lower yields, but they can be rapidly recharged. Some deep aquifers are known as "fossil waters. The term "fossil" describes water that has been present for several thousand years. These aquifers became saturated more than 10,000 years ago and are no longer being recharged.

Water does not remain immobile in an aquifer but can seep out at springs or leak into other aquifers. The rate of movement may be very slow: in the Indus plain, the movement of saline (salty) ground waters has still not reached equilibrium after 70 years of being tapped. The mineral content of groundwater normally increases with the depth, but even quite shallow aquifers can be highly saline.

Paragraph 1：Rainfall is not completely absent in desert areas, but it is highly variable. An annual rainfall of four inches is often used to define the limits of a desert. The impact of rainfall upon the surface water and groundwater resources of the desert is greatly influenced by landforms. Flats and depressions where water can collect are common features, but they make up only a small part of the landscape.

1. Which of the following statements about annual rainfall can be inferred from paragraph 1?

○Flat desert areas receive more annual rainfall than desert areas with mountains

○Areas that receive more than four inches of rain per year are not considered deserts.

○Many areas receive less than four inches of annual rainfall, but only a few are deserts

○Annual rainfall has no impact on the groundwater resources of desert areas.

Paragraph 2：Arid lands, surprisingly, contain some of the world's largest river systems, such as the Murray-Darling in Australia, the Rio Grande in North America, the Indus in Asia, and the Nile in Africa. These rivers and river systems are known as "exogenous" because their sources lie outside the arid zone. They are vital for

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sustaining life in some of the driest parts of the world. For centuries, the annual floods of the Nile. Tigris, and Euphrates, for example, has brought fertile silts and water to the inhabitants of their lower valleys. Today, river discharges are increasingly controlled by human intervention, creating a need for international river-basin agreements. The filling of the Ataturk and other dams in Turkey has drastically reduced flows in the Euphrates, with potentially serious consequences for Syria and Iraq.

2. The word drastically in the passage is closest in meaning to

○obviously

○unfortunately

○rapidly

○severely

3. In paragraph 2. Why does the author mention the Ataturk and other dams in Turkey?

○To contrast the Euphrates River with other exogenous rivers

○To illustrate the technological advances in dam building

○To argue that dams should not be built on the Euphrates River

○To support the idea that international river-basin agreements are needed

4. According to paragraph 2. Which of the following is true of the Nile River?

○The Nile's flow in its desert sections is at its lowest during the dry season

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○The Nile's sources are located in one of the most arid zones of the world

○The Nile's annual floods bring fertile silts and water to its lower valley

○The Nile's periodic flooding hinders the growth of some crops

Paragraph 5：Deserts contain large amounts of groundwater when compared to the amounts they hold in surface stores such as lakes and rivers. But only a small fraction of groundwater enters the hydrological cycle-feeding the flows of streams, maintaining lake levels, and being recharged (or refilled) through surface flows and rainwater. In recent years, groundwater has become an increasingly important source of freshwater for desert dwellers. The United Nations Environment Program me and the World Bank have funded attempts to survey the groundwater resources of arid lands and to develop appropriate extraction techniques. Such programs are much needed because in many arid lands there is only a vague idea of the extent of groundwater resources. It is known, however, that the distribution of groundwater is uneven, and that much of it lies at great depths.

5. The word dwellers in the passage is closest in meaning to

○settlements

○farmers

○tribes

○inhabitants

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6. Paragraph 5 supports all of the following statements about the groundwater In deserts EXCEPT:

○The groundwater is consistently found just below the surface

○A small part of the groundwater helps maintain lake levels

○Most of the groundwater is not recharged through surface water

○The groundwater is increasingly used as a source of freshwater

Paragraph 6: Groundwater is stored in the pore spaces and joints of rocks and unconsolidated (unsolidified) sediments or in the openings widened through fractures and weathering. The water-saturated rock or sediment is known as an "aquifer". Because they are porous, sedimentary rocks, such as sandstones and conglomerates, are important potential sources of groundwater. Large quantities of water may also be stored in lime stones when joints and cracks have been enlarged to form cavities. Most limestone and sandstone aquifers are deep and extensive but may contain ground waters that are not being recharged. Most shallow aquifers in sand and gravel deposits produce lower yields, but they can be rapidly recharged. Some deep aquifers are known as "fossil waters. The term "fossil" describes water that has been present for several thousand years. These aquifers became saturated more than 10,000 years ago and are no longer being recharged.

7. The word fractures in the passage is closest in meaning to

○streams

○cracks

○storms

○earthquakes

8. According to paragraph 6. Which of the following statements about aquifers in deserts is true?

○Water from limestone and sandstone aquifers is generally better to drink than water from sand and gravel aquifers

○Sand and gravel aquifers tend to contain less groundwater than limestone or sandstone aquifers

○Groundwater in deep aquifers is more likely to be recharged than groundwater in shallow aquifers

○Sedimentary rocks, because they are porous, are not capable of storing large amounts of groundwater

9. According to paragraph 6. the aquifers called fossil" waters

○contain fossils that are thousands of years old

○took more than 10.000 years to become saturated with water

○have not gained or lost any water for thousands of years

○have been collecting water for the past 10,000 years

Paragraph 7：Water does not remain immobile in an aquifer but can seep out at springs or leak into other aquifers. The rate of movement may be very slow: in

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the Indus plain, the movement of saline (salty) ground waters has still not reached equilibrium after 70 years of being tapped. The mineral content of groundwater normally increases with the depth, but even quite shallow aquifers can be highly saline.

10. The word immobile in the passage is closest in meaning to

○enclosed

○permanent

○motionless

○intact

11. The passage supports which of the following statements about water in the desert?

○The most visible forms of water are not the most widespread forms of water in the desert.

○Groundwater in the desert cannot become a source of drinking water but can be used for irrigation.

○Most of the water in the desert is contained in shallow aquifers that are being rapidly recharged.

○Desert areas that lack endogenous or exogenous rivers and streams cannot support life.

Paragraph 4：Regularly flowing rivers and streams that originate within arid

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lands are known as "endogenous." These are generally fed by groundwater springs, and many issue from limestone massifs, such as the Atlas Mountains in Morocco. Basaltic rocks also support springs, notably at the Jabal Al-Arab on the Jordan-Syria border. ■Endogenous Rivers often do not reach the sea but drain into inland basins, where the water evaporates or is lost in the ground. ■Most desert streambeds are normally dry, but they occasionally receive large flows of water and sediment.■

Paragraph 5：Deserts contain large amounts of groundwater when compared to the amounts they hold in surface stores such as lakes and rivers. ■But only a small fraction of groundwater enters the hydrological cycle-feeding the flows of streams, maintaining lake levels, and being recharged (or refilled) through surface flows and rainwater. In recent years, groundwater has become an increasingly important source of freshwater for desert dwellers. The United Nations Environment Program me and the World Bank have funded attempts to survey the groundwater resources of arid lands and to develop appropriate extraction techniques. Such programs are much needed because in many arid lands there is only a vague idea of the extent of groundwater resources. It is known, however, that the distribution of groundwater is uneven, and that much of it lies at great depths.

12. Look at the four squares [■] that indicate where the following sentence could be added to the passage

These sudden floods provide important water supplies but can also

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be highly destructive.

Where would the sentence best fit?

13. Directions: Select from the seven sentences below, the two sentences that correctly characterize endogenous rivers and the three sentences that correctly characterize exogenous rivers. Drag each sentence you select into the appropriate column of the table. Two of the sentences will NOT be used. *This question is worth 3 points.*

Endogenous Rivers

-
-

Exogenous Rivers

-
-
-

Answer Choices

- Their water generally comes from groundwater springs.
- Their water is saltier than the water of most other rivers.
- They include some of the world's largest rivers.
- They originate outside the desert.
- They often drain into inland basins and do not reach the sea.
- They contain too much silt to be useful for irrigation

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○Their water flow generally varies with the season of the year.

参考答案：

1. ○2

2. ○4

3. ○4

4. ○3

5. ○4

6. ○1

7. ○2

8.○2

9. ○3

10. ○3

11. ○1

12. ○3

13. ○Endogenous Rivers： 1, 5

○Exogenous Rivers： 3, 4, 7

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参考译文

沙漠中的水源

沙漠中并不是完全没有降雨，只不过是变数很大。通常一年以内降雨次数少于 4 次是定义沙漠的限定条件。降水对沙漠地表和地底的水资源的影响很大程度上取决于地貌。平原和洼地是水源聚集的共同地貌特征，不过他们只占地表的很小一部分。

令人惊奇的是，干旱地区往往都存在着世界上最大的河流流域，例如澳大利亚的墨累-达令河，北美洲的格兰德河，亚洲的印度河，以及非洲的尼罗河。这些河流被称作和所在的流域因为河的源头在干旱地区以外而被称为“外流河”。他们对于全世界沙漠地区的生命的存活至关重要。几个世纪以来，尼罗河每年都会定期泛滥。举个例子，幼发拉底河和底格里斯河都会把大量的肥沃的泥沙和水源带给下游低洼地带的居民。现在，河水的流量越来越多的受到人类的干涉，产生了国际性的河流流域的协议。阿卡杜克水坝以及其他一些建在土耳其境内的大坝就极大的减少了幼发拉底河的径流量，潜移默化的给叙利亚河和伊拉克造成了严重的后果。

外流河的径流量通常受季节影响。雨季过后，从外部流入沙漠区域的长河可以持续好几个月，以便保持干旱时节的相对较少的径流量。这虽然有助于灌溉，但是高温，低湿，以及干旱时节与众不同的日照时长，相比正常的生长季节也很难栽种一些作物。

通常发源地在干旱地区的河流和溪水被称为“内流河”。它们通常是又地下水的泉眼供给，也一些石灰岩断层中流出的水源供给，例如摩洛哥的阿特拉斯山。Basaltic 岩石也提供源头水，比较著名的就是约旦和叙利亚交接的 Jabal Al-Arab.内流河通常都不会到达大海而是注入内陆的低地的同时蒸发或者消失在地表。大多数沙漠的河床通常都是干枯的，偶有比较大的径流和沉积物。

相比于地表所的湖泊和河流含有的水量，沙漠中地下水的贮藏量要大得多。不过只有一小部分地下水参与了河流的水循环，保持湖泊的水位，并通过地表径流和降雨进行再造（再注入）。近些年来，地下水作为沙漠住民的活水来源的重要性日益加重。美国国家环境总署和世界银行开始拨款尝试调查统计干旱地区的地下水资源并发展合适的开采技术。像这样的工程非常必要因为在干旱地区对于地下水资源的保有量的概念非常模糊。然而可以确定的是，地下水资源的分布非常不均匀，且大多埋藏在很深的地底。

地下水一般储存在多孔道的地区和连接岩层的未凝固沉积层或者是通过风华和断裂形成的宽阔的孔洞。饱含水的岩石或沉积物被称为“蓄水层”。因为沉积岩的多孔性，比如砂岩和砾岩，都是地下水的重要潜在源头。大量的水资源也可能储存在石灰岩中，只要联结和裂口足够大到形成容器。大多数石灰岩和砂岩蓄水层很深且广大，但是保有的水资源是不能再生的。大多数沙石中的较浅的蓄水层只有较小的保有量，但是他们可以迅速的再生。一些深层的蓄水曾被称为“化石水”。“化石”的意思是说这里的水已经被保存了几千年之久。这些蓄水层充满水起码已经 1 万年以上

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了，而其他们在短期之内是无法再生的。

水在贮存在蓄水层中不是保持不流动的，而是通过泉眼或是渗漏进入其他的蓄水层，可以流动的比例可能很低；在印度平原，流动的含盐地下水在开发了 70 年以后依旧不能达到平静。矿石中保有的地下水通常会增加蓄水层的深度，但是较浅的安静蓄水层会饱含盐分。

Types of Social Groups

Life places us in a complex web of relationships with other people. Our humanness arises out of these relationships in the course of social interaction. Moreover, our humanness must be sustained through social interaction—and fairly constantly so. When an association continues long enough for two people to become linked together by a relatively stable set of expectations, it is called a relationship.

People are bound within relationships by two types of bonds: expressive ties and instrumental ties. Expressive ties are social links formed when we emotionally invest ourselves in and commit ourselves to other people. Through association with people who are meaningful to us, we achieve a sense of security, love, acceptance, companionship, and personal worth. Instrumental ties are social links formed when we cooperate with other people to achieve some goal. Occasionally, this may mean working with instead of against competitors. More often, we simply cooperate with others to reach some end without endowing the relationship with any larger significance.

Sociologists have built on the distinction between expressive and instrumental ties to distinguish between two types of groups: primary and secondary. A primary group involves two or more people who enjoy a direct, intimate, cohesive relationship with one another. Expressive ties predominate in primary

groups; we view the people as ends in themselves and valuable in their own right. A secondary group entails two or more people who are involved in an impersonal relationship and have come together for a specific, practical purpose. Instrumental ties predominate in secondary groups; we perceive people as means to ends rather than as ends in their own right. Sometimes primary group relationships evolve out of secondary group relationships. This happens in many work settings. People on the job often develop close relationships with coworkers as they come to share gripes, jokes, gossip, and satisfactions.

A number of conditions enhance the likelihood that primary groups will arise. First, group size is important. We find it difficult to get to know people personally when they are milling about and dispersed in large groups. In small groups we have a better chance to initiate contact and establish rapport with them. Second, face-to-face contact allows us to size up others. Seeing and talking with one another in close physical proximity makes possible a subtle exchange of ideas and feelings. And third, the probability that we will develop primary group bonds increases as we have frequent and continuous contact. Our ties with people often deepen as we interact with them across time and gradually evolve interlocking habits and interests.

Primary groups are fundamental to us and to society. First, primary groups are critical to the socialization process. Within them, infants and children are introduced to the ways of their society. Such groups are the breeding grounds in

which we acquire the norms and values that equip us for social life. Sociologists view primary groups as bridges between individuals and the larger society because they transmit, mediate, and interpret a society's cultural patterns and provide the sense of oneness so critical for social solidarity.

Second, primary groups are fundamental because they provide the settings in which we meet most of our personal needs. Within them, we experience companionship, love, security, and an overall sense of well-being. Not surprisingly, sociologists find that the strength of a group's primary ties has implications for the group's functioning. For example, the stronger the primary group ties of a sports team playing together, the better their record is.

Third, primary groups are fundamental because they serve as powerful instruments for social control. Their members command and dispense many of the rewards that are so vital to us and that make our lives seem worthwhile. Should the use of rewards fail, members can frequently win by rejecting or threatening to ostracize those who deviate from the primary group's norms. For instance, some social groups employ shunning (a person can remain in the community, but others are forbidden to interact with the person) as a device to bring into line individuals whose behavior goes beyond that allowed by the particular group. Even more important, primary groups define social reality for us by structuring our experiences. By providing us with definitions of situations, they elicit from our behavior that conforms to group-devised meanings. Primary

groups, then, serve both as carriers of social norms and as enforcers of them.

Paragraph 1: Life places us in a complex web of relationships with other people. Our humanness arises out of these relationships in the course of social interaction. Moreover, our humanness must be sustained through social interaction—and fairly constantly so. When an association continues long enough for two people to become linked together by a relatively stable set of expectations, it is called a relationship.

1. The word complex in the passage is closest in meaning to

○ delicate

○ elaborate

○ private

○ common

2. According to paragraph 1, which of the following is true of a relationship?

○ It is a structure of associations with many people.

○ It should be studied in the course of a social interaction.

○ It places great demands on people.

○ It develops gradually overtime.

Paragraph 2: People are bound within relationships by two types of bonds:

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expressive ties and instrumental ties. Expressive ties are social links formed when we emotionally invest ourselves in and commit ourselves to other people. Through association with people who are meaningful to us, we achieve a sense of security, love, acceptance, companionship, and personal worth. Instrumental ties are social links formed when we cooperate with other people to achieve some goal. Occasionally, this may mean working with instead of against competitors. More often, we simply cooperate with others to reach some end without endowing the relationship with any larger significance.

3. The word endowing in the passage is closest in meaning to

○ leaving

○ exposing

○ providing

○ understanding

4. Which of the following can be inferred about instrumental ties from the author's mention of working with competitors in paragraph 2?

○ Instrumental ties can develop even in situations in which people would normally not cooperate.

○ Instrumental ties require as much emotional investment as expressive ties.

○ Instrumental ties involve security, love, and acceptance.

○ Instrumental ties should be expected to be significant.

Paragraph 3：Sociologists have built on the distinction between expressive and instrumental ties to distinguish between two types of groups: primary and secondary. A primary group involves two or more people who enjoy a direct, intimate, cohesive relationship with one another. Expressive ties predominate in primary groups; we view the people as ends in themselves and valuable in their own right. A secondary group entails two or more people who are involved in an impersonal relationship and have come together for a specific, practical purpose. Instrumental ties predominate in secondary groups; we perceive people as means to ends rather than as ends in their own right. Sometimes primary group relationships evolve out of secondary group relationships. This happens in many work settings. People on the job often develop close relationships with coworkers as they come to share gripes, jokes, gossip, and satisfactions.

5. According to paragraph 3, what do sociologists see as the main difference between primary and secondary groups?

○ Primary groups consist of people working together, while secondary groups exist outside of work settings.

○ In primary groups people are seen as means, while in secondary groups people are seen as ends.

○ Primary groups involve personal relationships, while secondary groups are mainly practical in purpose.

○ Primary groups are generally small, while secondary groups often contain more than two people.

6. Which of the following can be inferred from the author's claim in paragraph 3 that primary group relationships sometimes evolve out of secondary group relationships?

○ Secondary group relationships begin by being primary group relationships.

○ A secondary group relationship that is highly visible quickly becomes a primary group relationship.

○ Sociologists believe that only primary group relationships are important to society.

○ Even in secondary groups, frequent communication serves to bring people into close relationships.

Paragraph 4：A number of conditions enhance the likelihood that primary groups will arise. First, group size is important. We find it difficult to get to know people personally when they are milling about and dispersed in large groups. In small groups we have a better chance to initiate contact and establish rapport with them. Second, face-to-face contact allows us to size up others. Seeing and talking with one another in close physical proximity makes possible a subtle exchange of ideas and feelings. And third, the probability that we will develop primary group bonds increases as we have frequent and continuous contact. Our ties with people often deepen as we interact with them across time and gradually evolve interlocking habits and interests.

7. The phrase size up in the passage is closest in meaning to

○ enlarge

○ evaluate

○ impress

○ accept

Paragraph 5: Primary groups are fundamental to us and to society. First, primary groups are critical to the socialization process. Within them, infants and children are introduced to the ways of their society. Such groups are the breeding grounds in which we acquire the norms and values that equip us for social life. Sociologists view primary groups as bridges between individuals and the larger society because they transmit, mediate, and interpret a society's cultural patterns and provide the sense of oneness so critical for social solidarity.

8. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○ Sociologists think that cultural patterns establish connections between the individual and the larger society.

○ Sociologists believe that individuals with a sense of oneness bridge the gap between society and primary groups.

○ Sociologists think primary groups contribute to social solidarity because they help maintain a society's cultural patterns.

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○ Sociologists believe that the cultural patterns that provide social solidarity arise as bridges from primary groups.

9. This passage is developed primarily by

○drawing comparisons between theory and practice

○presenting two opposing theories

○defining important concepts and providing examples of them

○discussing causes and their effects

Paragraph 7：Third, primary groups are fundamental because they serve as powerful instruments for social control. Their members command and dispense many of the rewards that are so vital to us and that make our lives seem worthwhile. Should the use of rewards fail, members can frequently win by rejecting or threatening to ostracize those who deviate from the primary group's norms. For instance, some social groups employ shunning (a person can remain in the community, but others are forbidden to interact with the person) as a device to bring into line individuals whose behavior goes beyond that allowed by the particular group. Even more important, primary groups define social reality for us by structuring our experiences. By providing us with definitions of situations, they elicit from us behavior that conforms to group-devised meanings. Primary groups, then, serve both as carriers of social norms and as enforcers of them.

10. The word deviate in the passage is closest in meaning to

○ detract

○ advance

○ select

○ depart

11. According to paragraph 7, why would a social group use shunning?

○ To enforce practice of the kinds of behavior acceptable to the group

○ To discourage offending individuals from remaining in the group

○ To commend and reward the behavior of the other members of the group

○ To decide which behavioral norms should be passed on to the next generation?

Paragraph 6：Second, primary groups are fundamental because they provide the settings in which we meet most of our personal needs. ■Within them, we experience companionship, love, security, and an overall sense of well-being. ■Not surprisingly, sociologists find that the strength of a group's primary ties has implications for the group's functioning. ■For example, the stronger the primary group ties of a sports team playing together, the better their record is.■

12. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

People who do not live alone, for example, tend to make healthier

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life choices and develop fewer pathologies than people who live by themselves.

Where would the sentence best fit?

13. Directions: Complete the table below by selecting three answer choices that are characteristics of primary groups and two answer choices that are characteristics of secondary groups. This question is worth 3 points.

Primary Groups

-
-
-

Secondary Groups

-
-

Answer Choices

○ Developing socially acceptable behavior

○ Working together against competitors

○ Experiencing pressure from outside forces

○ Viewing people as a means to an end

○ Existing for practical purposes

○ Providing meaning for life situations

○ Involving close relationships

参考答案：

1. ○2

2. ○4

3. ○3

4. ○1

5. ○3

6. ○4

7. ○2

8.○3

9. ○3

10. ○4

11. ○1

12. ○2

13.○Primary Groups: 1, 6, 7

○Secondary Groups: 4, 5

参考译文

社会群组的类型

我们和其他人一起生活在一个复杂的关系网中。我们的人性就产生于这种社会性的互动关系中，与此同时，我们的人性也必须通过经常性的社会互动才能得以保存。当两个人在比较稳定的期望值下的交流时间足够长并且形成一种联系时，这种联系就可以称为关系

人与人之间的关系可以分为两种：情感纽带和工具纽带。情感纽带在当我们感性的与他人交流时形成的一种社会联系。通过和对我们来说十分重要的人交流从而得到的安全感，爱情，认可，友谊和个人价值等一系列情感。工具纽带是但我们为了达到一些目标而与他人进行合作时产生的社会联系方式。有些时候，这也许意味着变相与竞争者一起共事。更多的时候我们没有发展出任何更有意义的关系而只是简单的与其他人合作并走向终点。

社会学家基于感情纽带与工具纽带的特征对两者进行了区分定义并划分出两种类型的群组：主要群组和次要群组。一个主要社群包含两个或更多人，他们都喜欢直接，亲密的，有粘性的与他人的关系。感情纽带在主要社群中起主导作用。我们审视人的时候是在他们生命的走到尽头的时候，还有他们的个人价值。次要群组也需要两个以上的不过是因为非个人关系而且聚到一起都是为了一个具体的，特定的目标。而工具纽带就在其中起了重要的作用。我们关注人们在最后的价值要比他们自己的权利要

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多。有时主要群组的关系也会在次要群组中演化出来。这种现象一般发生在一些工作安排当中。人们在共同合作中会相互发牢骚，开玩笑，传八卦以及满足感，由此依旧发展出了亲近的关系。

在一些情况下主要群组的扩大会导致生活习惯的增加。首先，群组的规模非常重要。当一个人身处并消失在一个巨大的群体里时，我们很难了解到他。但是在小型的群组里我们就能获得更多的机会开展联系并建立关系。第二点，面对面的久留能让我们更好的审视他们。与另一个人近距离的观察和交谈可以有更多的机会交流细微的感情与观念。第三点，我们发展主要群组的可能性和我们经常性的持续的交流息息相关。我们与其他人的纽带经常随着我们与其他人的互动而加深并演化为深层的相关联的习惯和兴趣。

主要群组是人与人之间乃至整个社会的基础。第一，主要群组是社会化进程的推动力量。在主要群组里，婴儿与孩童可以了解他们所处社会的种种处世办法。像这样的群组一般会产生于我们与我们的社会生活所需要的标准和价值观体系内。社会学家通过对主要群组的观察将其比喻为独立的个体与整个社会之间的桥梁，因为他能转换，能调节，能解释一个社会文化符号并且能够表达个体的感情并最终将二者合而为一。

第二点，主要群组之所以是基础是因为它能提供我们解决的各人需求的种种方法。在主要群组中，我们友谊，经历爱情，获得依靠以及所有我们所希望得到的情感。毫无疑问社会学家发现一个群组的主要纽带的强弱

往往暗示着这个群组的功能。比如，一群在一起比赛的队伍的主要群体纽带越强，他们的成绩就越好。

第三点，主要群组之所以是基础还因为他们提供强有力的社会统治工具。这之中的成员调集并分配能够维持我们的生存的极其重要的资源。如果不能分配无效，那么群组成员就会通过拒绝或是指控来摒弃那些背离组织标准的人，比如一些社会群组雇佣仲裁者（一种可以呆在群体中，但是却不能与群体成员互动的人）像一部机器一样的给那些习惯于超过这个群组所允许的范围行动的个体制定标准。更重要的是，主要群组通过构筑我们的经验来为我们的社会现实下定义。

通过向我们提供对我们的处境的定义，他们可以得出我们所遵守的组织所设计的意义的习性。主要群组，甚至会同时制定社会准则并不断的完善这些准则。

Biological Clocks

Survival and successful reproduction usually require the activities of animals to be coordinated with predictable events around them. Consequently, the timing and rhythms of biological functions must closely match periodic events like the solar day, the tides, the lunar cycle, and the seasons. The relations between animal activity and these periods, particularly for the daily rhythms, have been of such interest and importance that a huge amount of work has been done on them and the special research field of chronobiology has emerged. Normally, the constantly changing levels of an animal's activity—sleeping, feeding, moving, reproducing, metabolizing, and producing enzymes and hormones, for example—are well coordinated with environmental rhythms, but the key question is whether the animal's schedule is driven by external cues, such as sunrise or sunset, or is instead dependent somehow on internal timers that themselves generate the observed biological rhythms. Almost universally, biologists accept the idea that all eukaryotes (a category that includes most organisms except bacteria and certain algae) have internal clocks. By isolating organisms completely from external periodic cues, biologists learned that organisms have internal clocks. For instance, apparently normal daily periods of biological activity were maintained for about a week by the fungus Neurospora when it was intentionally isolated from all geophysical timing cues while orbiting in a space shuttle. The continuation of biological rhythms in an organism without external cues attests to its having an internal clock.

When crayfish are kept continuously in the dark, even for four to five months, their compound eyes continue to adjust on a daily schedule for daytime and nighttime vision. Horseshoe crabs kept in the dark continuously for a year were found to maintain a persistent rhythm of brain activity that similarly adapts their eyes on a daily schedule for bright or for weak light. Like almost all daily cycles of animals deprived of environmental cues, those measured for the horseshoe crabs in these conditions were not exactly 24 hours. Such a rhythm whose period is approximately—but not exactly—a day is called circadian. For different individual horseshoe crabs, the circadian period ranged from 22.2 to 25.5 hours. A particular animal typically maintains its own characteristic cycle duration with great precision for many days. Indeed, stability of the biological clock's period is one of its major features, even when the organism's environment is subjected to considerable changes in factors, such as temperature, that would be expected to affect biological activity strongly. Further evidence for persistent internal rhythms appears when the usual external cycles are shifted—either experimentally or by rapid east-west travel over great distances. Typically, the animal's daily internally generated cycle of activity continues without change. As a result, its activities are shifted relative to the external cycle of the new environment. The disorienting effects of this mismatch between external time cues and internal schedules may persist, like our jet lag, for several days or weeks until certain cues such as the daylight/darkness cycle reset the organism's clock to synchronize with the daily rhythm of the new environment.

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Animals need natural periodic signals like sunrise to maintain a cycle whose period is precisely 24 hours. Such an external cue not only coordinates an animal's daily rhythms with particular features of the local solar day but also—because it normally does so day after day-seems to keep the internal clock's period close to that of Earth's rotation. Yet despite this synchronization of the period of the internal cycle, the animal's timer itself continues to have its own genetically built-in period close to, but different from, 24 hours. Without the external cue, the difference accumulates and so the internally regulated activities of the biological day drift continuously, like the tides, in relation to the solar day. This drift has been studied extensively in many animals and in biological activities ranging from the hatching of fruit fly eggs to wheel running by squirrels. Light has a predominating influence in setting the clock. Even a fifteen-minute burst of light in otherwise sustained darkness can reset an animal's circadian rhythm. Normally, internal rhythms are kept in step by regular environmental cycles. For instance, if a homing pigeon is to navigate with its Sun compass, its clock must be properly set by cues provided by the daylight/darkness cycle.

Paragraph 1：Survival and successful reproduction usually require the activities of animals to be coordinated with predictable events around them. Consequently, the timing and rhythms of biological functions must closely match periodic events like the solar day, the tides, the lunar cycle, and the seasons.

The relations between animal activity and these periods, particularly for the daily rhythms, have been of such interest and importance that a huge amount of work has been done on them and the special research field of chronobiology has emerged. Normally, the constantly changing levels of an animal's activity—sleeping, feeding, moving, reproducing, metabolizing, and producing enzymes and hormones, for example—are well coordinated with environmental rhythms, but the key question is whether the animal's schedule is driven by external cues, such as sunrise or sunset, or is instead dependent somehow on internal timers that themselves generate the observed biological rhythms. Almost universally, biologists accept the idea that all eukaryotes (a category that includes most organisms except bacteria and certain algae) have internal clocks. By isolating organisms completely from external periodic cues, biologists learned that organisms have internal clocks. For instance, apparently normal daily periods of biological activity were maintained for about a week by the fungus Neurospora when it was intentionally isolated from all geophysical timing cues while orbiting in a space shuttle. The continuation of biological rhythms in an organism without external cues attests to its having an internal clock.

1. The word Consequently in the passage is closest in meaning to

○Therefore

○Additionally

○Nevertheless

○Moreover

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2. In paragraph 1, the experiment on the fungus Neurospora is mentioned to illustrate

○the existence of weekly periods of activity as well as daily ones

○the finding of evidence that organisms have internal clocks

○the effect of space on the internal clocks of organisms

○the isolation of one part of an organism's cycle for study

3. According to paragraph 1, all the following are generally assumed to be true EXCEPT:

○It is important for animals' daily activities to be coordinated with recurring events in their environment.

○Eukaryotes have internal clocks.

○The relationship between biological function and environmental cycles is a topic of intense research.

○Animals' daily rhythms are more dependent on external cues than on internal clocks.

Paragraph 2：When crayfish are kept continuously in the dark, even for four to five months, their compound eyes continue to adjust on a daily schedule for daytime and nighttime vision. Horseshoe crabs kept in the dark continuously for a year were found to maintain a persistent rhythm of brain activity that similarly adapts their eyes on a daily schedule for bright or for weak light. Like almost all

daily cycles of animals deprived of environmental cues, those measured for the horseshoe crabs in these conditions were not exactly 24 hours. Such a rhythm whose period is approximately—but not exactly—a day is called circadian. For different individual horseshoe crabs, the circadian period ranged from 22.2 to 25.5 hours. A particular animal typically maintains its own characteristic cycle duration with great precision for many days. Indeed, stability of the biological clock's period is one of its major features, even when the organism's environment is subjected to considerable changes in factors, such as temperature, that would be expected to affect biological activity strongly. Further evidence for persistent internal rhythms appears when the usual external cycles are shifted—either experimentally or by rapid east-west travel over great distances. Typically, the animal's daily internally generated cycle of activity continues without change. As a result, its activities are shifted relative to the external cycle of the new environment. The disorienting effects of this mismatch between external time cues and internal schedules may persist, like our jet lag, for several days or weeks until certain cues such as the daylight/darkness cycle reset the organism's clock to synchronize with the daily rhythm of the new environment.

4. The word persistent in the passage is closest in meaning to

○adjusted

○strong

○enduring

○predicted

5. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○Stability, a feature of the biological clock's period, depends on changeable factors such as temperature.

○A major feature of the biological clock is that its period does not change despite significant changes in the environment.

○A factor such as temperature is an important feature in the establishment of the biological clock's period.

○Biological activity is not strongly affected by changes in temperature.

6. According to paragraph 2, which of the following is true about the circadian periods of animals deprived of environmental cues?

○They have the same length as the daily activity cycles of animals that are not deprived of such cues.

○They can vary significantly from day to day.

○They are not the same for all members of a single species.

○They become longer over time.

7. According to paragraph 2, what will an animal experience when its internal rhythms no longer correspond with the daily cycle of the environment?

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○Disorientation

○Change in period of the internal rhythms

○Reversal of day and night activities Increased

○Sensitivity to environmental factors

8. In paragraph 2, the author provides evidence for the role of biological clocks by

○listing the daily activities of an animal's cycle: sleeping, feeding, moving, reproducing, metabolizing, and producing enzymes and hormones

○describing the process of establishing the period of a biological clock

○presenting cases in which an animal's daily schedule remained stable despite lack of environmental cues

○contrasting animals whose daily schedules fluctuate with those of animals whose schedules are constant

9. The word duration in the passage is closest in meaning to

○length

○feature

○process

○repetition

10. In paragraph 2, why does the author mention that the period for different horseshoe crabs ranges from 22.2 to 25.5 hours?

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○To illustrate that an animal's internal clock seldom has a 24-hour cycle

○To argue that different horseshoe crabs will shift from daytime to nighttime vision at different times

○To illustrate the approximate range of the circadian rhythm of all animals

○To support the idea that external cues are the only factors affecting an animal's periodic behavior

Paragraph 3：Animals need natural periodic signals like sunrise to maintain a cycle whose period is precisely 24 hours. ■Such an external cue not only coordinates an animal's daily rhythms with particular features of the local solar day but also—because it normally does so day after day-seems to keep the internal clock's period close to that of Earth's rotation. ■Yet despite this synchronization of the period of the internal cycle, the animal's timer itself continues to have its own genetically built-in period close to, but different from, 24 hours. ■Without the external cue, the difference accumulates and so the internally regulated activities of the biological day drift continuously, like the tides, in relation to the solar day. ■This drift has been studied extensively in many animals and in biological activities ranging from the hatching of fruit fly eggs to wheel running by squirrels. Light has a predominating influence in setting the clock. Even a fifteen-minute burst of light in otherwise sustained darkness can reset an animal's circadian rhythm. Normally, internal rhythms are kept in step by regular environmental cycles. For instance, if a homing pigeon is to navigate with its Sun compass, its clock must be properly set by cues provided by the daylight/darkness

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cycle.

11. The word it in the passage refers to

○ an external cue such as sunrise

○ the daily rhythm of an animal

○ the local solar day

○ a cycle whose period is precisely 24 hours

12. The word sustained in the passage is closest in meaning to

○ intense

○ uninterrupted

○ natural

○ periodic

Paragraph 3：Animals need natural periodic signals like sunrise to maintain a cycle whose period is precisely 24 hours. ■Such an external cue not only coordinates an animal's daily rhythms with particular features of the local solar day but also—because it normally does so day after day-seems to keep the internal clock's period close to that of Earth's rotation. ■Yet despite this synchronization of the period of the internal cycle, the animal's timer itself continues to have its own genetically built-in period close to, but different from, 24 hours. ■Without the external cue, the difference accumulates and so the internally regulated activities of the biological day drift continuously, like the tides,

in relation to the solar day. ■This drift has been studied extensively in many animals and in biological activities ranging from the hatching of fruit fly eggs to wheel running by squirrels. Light has a predominating influence in setting the clock. Even a fifteen-minute burst of light in otherwise sustained darkness can reset an animal's circadian rhythm. Normally, internal rhythms are kept in step by regular environmental cycles. For instance, if a homing pigeon is to navigate with its Sun compass, its clock must be properly set by cues provided by the daylight/darkness cycle.

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

Because the internal signals that regulate waking and going to sleep tend to align themselves with these external cues, the external clock appears to dominate the internal clock.

Where would the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

The activity of animals is usually coordinated with periodically recurring

events in the environment.

●

●

●

Answer Choices

○Most animals survive and reproduce successfully without coordinating their activities to external environmental rhythms.

○The circadian period of an animal's internal clock is genetically determined and basically unchangeable.

○Environmental cues such as a change in temperature are enough to reset an animal's clock.

○Animals have internal clocks that influence their activities even when environmental cues are absent.

○Animals are less affected by large differences between their internal rhythms and the local solar day than are humans

○Because an animal's internal clock does not operate on a 24-hour cycle, environmental stimuli are needed to keep the biological day aligned with the solar day.

参考答案：

1. ○1

2. ○2

3. ○4

4. ○3

5. ○2

6. ○3

7. ○1

8.○3

9. ○1

10. ○1

11. ○1

12. ○2

13. ○2

14. ○2, 4, 6

参考译文

生物钟

生存与繁衍通常需要动物的活动与他们所能预料到的事件同步。生物的计时与交替循环的机能也就理所应当的必须与像昼夜交替，潮涨潮落，月圆月缺和四季更迭这样的周期性事件保持大体的一致。动物的活动与这些周期之间的关系，特别是与昼夜交替之间的关系，因为大量的工作都是在其基础之上完成的而拥有巨大的吸引力和重要性，从而也延伸出了一个新的研究领域：生物钟学科。通常意义上讲，动物活动的经常性转变——例如，睡觉，喂食，活动，繁殖和产生酶与荷尔蒙，都是与环境的循环同步的，但是关键问题在于，动物的作息是否是由外界条件驱使，比如日出日落，又或者是受他们自身产生并遵循的内在生物循环，生物学家普遍接受的观点是所有的多细胞生物(除了细菌与一些海藻以外的绝大多数物种)都有内在钟。通过将生物与外界的周期性暗示完全隔离，生物学家们发现生物确实有内在钟。举个例子，通过一种叫脉孢菌的细菌清晰的证明了在绕地球公转的太空飞船中完全与所有地理事件信号隔离的情况下，所有的生物日常活动周期可以持续大概一个礼拜左右。这种在没有外界信号的时候生物循环的延续性证明生物是具有内在钟的。

小龙虾在黑暗中持续的活动哪怕是四五个月，他们的复眼也仍然继续按日常循环的昼与夜来调节视野。马蹄蟹可以在黑暗中保持一年的连续性大脑周期活动来使他们的眼睛适应日常交替的高光与弱光的周期一致。如同大多数的日循环动物被剥夺了外界暗示一样，对于马蹄蟹来说

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在这种无光的情况下他们的时长也不一定是准时的 24 小时。这种和一天的循环周期很接近但不精确同步的循环叫做生理节奏。不同的马蹄蟹个体，生理节奏在也 22.2 小时到 25.5 小时之间。一种特定的动物会将其特有的精密循环长度保持很多天。确实，稳定性是生物钟最重要的特性之一，即使是在生物所处的环境的诸多要素中发生了相当大的改变，例如温度，不能对生物钟产生很大影响。关于生物钟持续性更进一步的证据出现在当正常的外部循环发生突变，如科研或者从东到西急速的长途旅行。

动物的内在以天为单位的典型周期循环活动仍然会继续而不会有什么改变。但与此同时，生物的活动与却因为与新环境中的外部循环相关联而改变。外部时间与内在循环的持续性不同步而产生的错乱反应，比如我们的时差综合症，要耗费几天或者几个星期直到不变信号比如白天黑夜循环重新设定生物钟并将其同步到新环境的日常循环中。

动物需要例如日出这样的自然界的周期信号来保持他们的循环周期为精准的 24 小时。这类的外部信号不仅可以通过特定的标志——当地的白昼同步动物的每日循环，而且也正是因为这些活动日复一日的保持着内在钟的周期接近地球自转。但是尽管有这些内在钟的同步，动物的计时器仍然继续靠着它构筑在遗传上的区别于外部的周期，近似 24 小时。在没有外部信号时，不同的收集方式和这种内在的调节机制作用下的生物活动保持这继续，比如潮汐，就与太阳有关系。这种调节被广泛的研究在许多动物和生物活动调节从孵化的果蝇卵到松树的滚轮跑。光在调

节生物钟里占主导位置。即使是 15 分钟的强光在黑暗中发生也可以改变动物的生理节奏。通常来讲，内在循环会紧随环境循环的步伐。举个例子，如果一个家鸽在太阳的指引下飞行，那么它的生物钟就必须严格遵守日出日落的循环。

Methods of Studying Infant Perception

In the study of perceptual abilities of infants, a number of techniques are used to determine infants' responses to various stimuli. Because they cannot verbalize or fill out questionnaires, indirect techniques of naturalistic observation are used as the primary means of determining what infants can see, hear, feel, and so forth. Each of these methods compares an infant's state prior to the introduction of a stimulus with its state during or immediately following the stimulus. The difference between the two measures provides the researcher with an indication of the level and duration of the response to the stimulus. For example, if a[uniformly] moving pattern of some sort is passed across the visual field of a neonate (new born), [repetitive following movements of the eye] occur. The occurrence of these eye movements provides evidence that the moving pattern is perceived at some level by the newborn. Similarly, changes in the infant's general level of motor activity —turning the head, blinking the eyes, crying, and so forth — have been used by researchers as visual indicators of the infant's perceptual abilities.

Such techniques, however, have limitations. First, the observation may be unreliable in that two or more observers may not agree that the particular response occurred, or to what degree it occurred. Second, responses are difficult to quantify. Often the rapid and diffuse movements of the infant make it difficult to get an accurate record of the number of responses. The third, and most [potent],

limitation is that it is not possible to be certain that the infant's response was due to the stimulus presented or to a change from no stimulus to a stimulus. The infant may be responding to aspects of the stimulus different than those identified by the investigator. [Therefore, when observational assessment is used as a technique for studying infant perceptual abilities, care must be taken not to overgeneralize from the data or to rely on one or two studies as conclusive evidence of a particular perceptual ability of the infant.]

Observational assessment techniques have become much more sophisticated, reducing the limitations just presented. Film analysis of the infant's responses, heart and respiration rate monitors, and nonnutntive sucking devices are used as effective tools in understanding infant perception. Film analysis permits researchers to carefully study the infant's responses over and over and in slow motion. Precise measurements can be made of the length and frequency of the infant's attention between two stimuli. Heart and respiration monitors provide the investigator with the number of heartbeats or breaths taken when a new stimulus is presented. Numerical increases are used as [quantifiable] indicators of heightened interest in the new stimulus. Increases in nonnutntive sucking were first used as an assessment measure by researchers in 1969. They devised an apparatus that connected a baby's pacifier to a counting device. As stimuli were presented, changes in the infant's sucking behavior were recorded. Increases in the number of sucks were used as an indicator of the infant's attention to or preference for a given visual display.

Two additional techniques of studying infant perception have come into vogue. The first is the habituation-dishabituation technique, in which a single stimulus is presented repeatedly to the infant until there is a measurable decline (habituation) in whatever attending behavior is being observed. At that point a new stimulus is presented, and any recovery (dishabituation) in responsiveness is recorded. If the infant fails to dishabituate and continues to show habituation with the new stimulus, it is assumed that the baby is unable to perceive the new stimulus as different. The habituation-dishabituation paradigm has been used most extensively with studies of auditory and olfactory perception in infants. The second technique relies on evoked potentials, which are electrical brain responses that may be related to a particular stimulus because of where they originate. Changes in the electrical pattern of the brain indicate that the stimulus is getting through to the infant's central nervous system and eliciting some form of response.

Each of the preceding techniques provides the researcher with evidence that the infant can detect or discriminate between stimuli. With these sophisticated observational assessment and electro physiological measures, we know that the neonate of only a few days is far more perceptive than previously suspected. However, these measures are only "indirect" indicators of the infant's perceptual abilities.

Paragraph 1: In the study of perceptual abilities of infants, a number of techniques are used to determine infants' responses to various stimuli. Because they cannot verbalize or fill out questionnaires, indirect techniques of naturalistic observation are used as the primary means of determining what infants can see, hear, feel, and so forth. Each of these methods compares an infant's state prior to the introduction of a stimulus with its state during or immediately following the stimulus. The difference between the two measures provides the researcher with an indication of the level and duration of the response to the stimulus. For example, if a uniformly moving pattern of some sort is passed across the visual field of a neonate (new born), repetitive following movements of the eye occur. The occurrence of these eye movements provides evidence that the moving pattern is perceived at some level by the newborn. Similarly, changes in the infant's general level of motor activity —turning the head, blinking the eyes, crying, and so forth — have been used by researchers as visual indicators of the infant's perceptual abilities.

1. Paragraph 1 indicates that researchers use indirect methods primarily to observe the

○range of motor activity in neonates

○frequency and duration of various stimuli

○change in an infant's state following the introduction of a stimulus

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○range of an infant's visual field

2. The word uniformly in the passage is closest in meaning to

○clearly

○quickly

○consistently

○occasionally

3. Why does the author mention repetitive following movements of the eye ?

○To identify a response that indicates a neonate's perception of a stimulus

○To explain why a neonate is capable of responding to stimuli only through repetitive movements

○To argue that motor activity in a neonate may be random and unrelated to stimuli

○To emphasize that responses to stimuli vary in infants according to age

Paragraph 2： Such techniques, however, have limitations. First, the observation may be unreliable in that two or more observers may not agree that the particular response occurred, or to what degree it occurred. Second, responses are difficult to quantify. Often the rapid and diffuse movements of the infant make it difficult to get an accurate record of the number of responses. The third, and most potent, limitation is that it is not possible to be certain that the infant's

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response was due to the stimulus presented or to a change from no stimulus to a stimulus. The infant may be responding to aspects of the stimulus different than those identified by the investigator. Therefore, when observational assessment is used as a technique for studying infant perceptual abilities, care must be taken not to overgeneralize from the data or to rely on one or two studies as conclusive evidence of a particular perceptual ability of the infant.

4. Which of the following is NOT mentioned in paragraph 2 as a problem in using the technique of direct observation?

○It is impossible to be certain of the actual cause of an infant's response.

○Infants' responses, which occur quickly and diffusely, are often difficult to measure.

○Infants do not respond well to stimuli presented in an unnatural laboratory setting.

○It may be difficult for observers to agree on the presence or the degree of a response.

5. The word potent in the passage is closest in meaning to

○artificial

○powerful

○common

○similar

6. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○Researchers using observational assessment techniques on infants must not over generalize and must base their conclusions on data from many studies.

○On the basis of the data from one or two studies, it seems that some infants develop a particular perceptual ability not observed in others.

○To use data from one or two studies on infant's perceptual abilities, it is necessary to use techniques that will provide conclusive evidence.

○When researchers fail to make generalizations from their studies, their observed data is often inconclusive.

Paragraph 3：Observational assessment techniques have become much more sophisticated, reducing the limitations just presented. Film analysis of the infant's responses, heart and respiration rate monitors, and nonnutntive sucking devices are used as effective tools in understanding infant perception. Film analysis permits researchers to carefully study the infant's responses over and over and in slow motion. Precise measurements can be made of the length and frequency of the infant's attention between two stimuli. Heart and respiration monitors provide the investigator with the number of heartbeats or breaths taken when a new stimulus is presented. Numerical increases are used as quantifiable indicators of heightened interest in the new stimulus. Increases in nonnutntive sucking were first used as an assessment measure by

researchers in 1969. They devised an apparatus that connected a baby's pacifier to a counting device. As stimuli were presented, changes in the infant's sucking behavior were recorded. Increases in the number of sucks were used as an indicator of the infant's attention to or preference for a given visual display.

7. What is the author's primary purpose in paragraph 3?

○To explain why researchers must conduct more than one type of study when they are attempting to understand infant perception

○To describe new techniques for observing infant perception that overcome problems identified in the previous paragraph

○To present and evaluate the conclusions of various studies on infant perception

○To point out the strengths and weaknesses of three new methods for quantifying an infant's reaction to stimuli

8. The word quantifiable in the passage is closest in meaning to

○visual

○permanent

○meaningful

○measurable

9. Paragraph 3 mentions all of the following as indications of an infant's heightened interest in a new stimulus EXCEPT an increase in

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○sucking behavior

○heart rate

○the number of breaths taken

○eye movements

Paragraph 4: Two additional techniques of studying infant perception have come into vogue. The first is the habituation-dishabituation technique, in which a single stimulus is presented repeatedly to the infant until there is a measurable decline (habituation) in whatever attending behavior is being observed. At that point a new stimulus is presented, and any recovery (dishabituation) in responsiveness is recorded. If the infant fails to dishabituate and continues to show habituation with the new stimulus, it is assumed that the baby is unable to perceive the new stimulus as different. The habituation-dishabituation paradigm has been used most extensively with studies of auditory and olfactory perception in infants. The second technique relies on evoked potentials, which are electrical brain responses that may be related to a particular stimulus because of where they originate. Changes in the electrical pattern of the brain indicate that the stimulus is getting through to the infant's central nervous system and eliciting some form of response.

10. According to paragraph 4, which of the following leads to the conclusion that infants are able to differentiate between stimuli in a habituation dishabituation study?

○Dishabituation occurs with the introduction of a new stimulus.

○Electrical responses in the infant's brain decline with each new stimulus.

○Habituation is continued with the introduction of a new stimulus.

○The infant displays little change in electrical sbrain responses.

11. In paragraph 4, what does the author suggest about the way an infant's brain perceives stimuli?

○An infant's potential to respond to a stimulus may be related to the size of its brain.

○Changes in the electrical patterns of an infant's brain are difficult to detect.

○Different areas of an infant's brain respond to different types of stimuli.

○An infant is unable to perceive more than one stimulus at a time.

Paragraph 5：Each of the preceding techniques provides the researcher with evidence that the infant can detect or discriminate between stimuli. With these sophisticated observational assessment and electro physiological measures, we know that the neonate of only a few days is far more perceptive than previously suspected. However, these measures are only "indirect" indicators of the infant's perceptual abilities.

12. Paragraph 5 indicates that researchers who used the techniques described in the passage discovered that

○infants find it difficult to perceive some types of stimuli

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○neonates of only a few days cannot yet discriminate between stimuli

○observational assessment is less useful for studying infant perception than researchers previously believed

○a neonate is able to perceive stimuli better than researchers once thought

Paragraph 3：Observational assessment techniques have become much more sophisticated, reducing the limitations just presented. Film analysis of the infant's responses, heart and respiration rate monitors, and nonnutntive sucking devices are used as effective tools in understanding infant perception. ■Film analysis permits researchers to carefully study the infant's responses over and over and in slow motion. ■Precise measurements can be made of the length and frequency of the infant's attention between two stimuli. ■Heart and respiration monitors provide the investigator with the number of heartbeats or breaths taken when a new stimulus is presented. ■Numerical increases are used as quantifiable indicators of heightened interest in the new stimulus. Increases in nonnutntive sucking were first used as an assessment measure by researchers in 1969. They devised an apparatus that connected a baby's pacifier to a counting device. As stimuli were presented, changes in the infant's sucking behavior were recorded. Increases in the number of sucks were used as an indicator of the infant's attention to or preference for a given visual display.

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

The repetition allows researchers to observe the infant's behavior until they reach agreement about the presence and the degree of the infant's response.

Where would the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

Researchers use a number of techniques to determine how infants respond to changes in their environment

●

●

●

Answer choices

○Data from observational methods must be confirmed through multiple studies.

○New techniques for studying infant perception have improved the accuracy with which researchers observe and quantify infant responses

○Indirect observation is most accurate when researchers use it to test auditory and olfactory perception in neonates.

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○Visual indicators such as turning the head, blinking the eyes, or crying remain the best evidence of an infant's perceptual abilities.

○Pacifiers are commonly used in studies to calm an infant who has been presented with excessive stimuli.

○Sophisticated techniques that have aided new discoveries about perception in the neonate continue to be indirect measures.

参考答案：

1. ○3

2. ○3

3. ○1

4. ○3

5. ○2

6. ○1

7. ○2

8.○4

9. ○4

10. ○1

11. ○3

12. ○4

13. ○2

14. ○1, 2, 6

参考译文

研究婴儿感知能力的方法

在对婴儿感知能力的研究中，许多技术被应用于确定婴儿对不同刺激的反应，由于他们（婴儿）无法用言语表达或者填写问卷，所以自然观察的非直接性技术被应用于确定婴儿看，听，感知等的要表达的本意。这些方法都是将在刺激引入前和刺激引入的同时或紧随其后婴儿产生的反应作对比。对刺激的反应程度和反应持续时间是可以提供给研究人员的两种不同的评判标准。比如说，如果一个移动的物体的通过新生儿的视线『即重复移动眼睛进行跟随发生的话』。这个眼球移动的现象就说明移动的物体在一定程度上引起的新生儿的注意。同样的，改变新生儿的一般程度的活动，比如摆头，眨眼，哭或者别的，都可以提供研究人员对于婴儿感知能力的研究提供直观参考。

但这些技术也是有局限性的。第一，两个甚至更多的观察者也许不会察觉到特殊反应的发生或者什么促使他发生，这样的话这种观察就是不可靠的。第二，反应难以被量化，婴儿的很多反应是发生的在很短的时间内以至于研究人员很难准确记录。第三点也是最重要的一点，不可能非常明确的说婴儿的反应是由现存的刺激或者后产生的刺激所导致的。婴儿可能只是对刺激所表现的反应可能因观察者的不同而不同。同时必须要注意的是，用这些技术所产生的观察结果必须过于从资料中概括或者仅仅只是靠一个或两个特殊的婴儿感知能力研究而作为收集到的证据。

观察评估技术变得更加复杂，所受的限制也在减少。膜状婴儿反射分析，心脏和呼息频率的稳定性和奶嘴被作为高效的工具用于理解婴儿的感知能力。膜状反射分析允许观察者小心的一遍遍的研究婴儿的相对缓慢的反应。通过婴儿在两次刺激之间的注意力的长度和频率可以制造出严谨的数据标准。心脏和呼吸频率测量仪可以在新的刺激产生时提供给观察者婴儿的心跳次数和呼吸间隙。数值增长被用于一些新刺激的兴趣提升。1969年，奶嘴的吮吸动作的增加次数首次被研究人员作为评估标准。他们设计出了一个连接着仪表的婴儿奶嘴。只要刺激出现，婴儿的吸允习惯就会被记录。吮吸次数的增加也就变成了对婴儿所表现出的注意力以及喜好的直观展示。

另有两个研究婴儿感知的技术走进人们的视野。第一个就是习惯非习惯性技术，靠的是观察一个单一的重复的对婴儿的刺激，直到婴儿对这一信号形成习惯并对信号的反应出现可测量的减弱（习惯性）。然后在一个新的刺激的出现时，任何对新刺激的反应的平复也都会被记录下来（非习惯性）。如果婴儿没有不习惯而是持续表示出对那些新刺激的习惯性，那么就可以假定婴儿没有办法识别出新的刺激有什么不同。这种习惯于非习惯的实验被广泛应用与听觉与嗅觉的婴儿感知研究上。另一种技术依靠唤醒潜能，脑电波的反应可能与特殊刺激的感受区相关联。改变大脑指示的电讯号可以让刺激通过中枢神经系统并且唤醒相应的反射区。

以上所说的每一种技术都可以给研究者提供关于婴儿能够探知或区别刺激的依据，通过这些复杂的观察记录和电子生物学的探测，我们知道一

个只有几天的新生儿能探知的要远比我们之前猜测的要多的多。然而，这些标准也只是通过间接的指示器所测量到的婴儿感知的能力。

Children and Advertising

Young children are trusting of commercial advertisements in the media, and advertisers have sometimes been accused of taking advantage of this trusting outlook. The Independent Television Commission, regulator of television advertising in the United Kingdom, has criticized advertisers for "misleadingness'—creating a wrong impression either intentionally or unintentionally—in an effort to control advertisers' use of techniques that make it difficult for children to judge the true size, action, performance, or construction of a toy.

General concern about misleading tactics that advertisers employ is centered on the use of exaggeration. Consumer protection groups and parents believe that children are largely ill-equipped to recognize such techniques and that often exaggeration is used at the expense of product information. Claims such as "the best' or “better than" can be subjective and misleading; even adults may be unsure as to their meaning. They represent the advertiser's opinions about the qualities of their products or brand and, as a consequence, are difficult to verify. Advertisers sometimes offset or counterbalance an exaggerated claim with a disclaimer—a qualification or condition on the claim. For example, the claim that breakfast cereal has a health benefit may be accompanied by the disclaimer "when part of a nutritionally balanced breakfast.' However, research has shown that children often have difficulty understanding disclaimers: children may interpret the phrase 'when part of a nutritionally balanced breakfast" to mean that the cereal is required as a

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necessary part of a balanced breakfast. The author George Comstock suggested that less than a quarter of children between the ages of six and eight years old understood standard disclaimers used in many toy advertisements and that disclaimers are more readily comprehended when presented in both audio and visual formats. Nevertheless, disclaimers are mainly presented in audio format only.

Fantasy is one of the more common techniques in advertising that could possibly mislead a young audience. Child-oriented advertisements are more likely to include magic and fantasy than advertisements aimed at adults. In a content analysis of Canadian television, the author Stephen Kline observed that nearly all commercials for character toys featured fantasy play. Children have strong imaginations and the use of fantasy brings their ideas to life, but children may not be adept enough to realize that what they are viewing is unreal. Fantasy situations and settings are frequently used to attract children's attention, particularly in food advertising. Advertisements for breakfast cereals have, for many years, been found to be especially fond of fantasy techniques, with almost nine out of ten including such content. Generally, there is uncertainty as to whether very young children can distinguish between fantasy and reality in advertising. Certainly, rational appeals in advertising aimed at children are limited, as most advertisements use emotional and indirect appeals to psychological states or associations.

The use of celebrities such as singers and movie stars is common in

advertising. The intention is for the positively perceived attributes of the celebrity to be transferred to the advertised product and for the two to become automatically linked in the audience's mind. In children's advertising, the celebrities are often animated figures from popular cartoons. In the recent past, the role of celebrities in advertising to children has often been conflated with the concept of host selling. Host selling involves blending advertisements with regular programming in a way that makes it difficult to distinguish one from the other. Host selling occurs, for example, when a children's show about a cartoon lion contains an ad in which the same lion promotes a breakfast cereal. The psychologist Dale Kunkel showed that the practice of host selling reduced children's ability to distinguish between advertising and program material. It was also found that older children responded more positively to products in host selling advertisements.

Regarding the appearance of celebrities in advertisements that do not involve host selling, the evidence is mixed. Researcher Charles Atkin found that children believe that the characters used to advertise breakfast cereals are knowledgeable about cereals, and children accept such characters as credible sources of nutritional information. This finding was even more marked for heavy viewers of television. In addition, children feel validated in their choice of a product when a celebrity endorses that product. A study of children in Hong Kong, however, found that the presence of celebrities in advertisements could negatively affect the children’s perceptions of a product if the children did not like the celebrity in

question.

Paragraph 1: Young children are trusting of commercial advertisements in the media, and advertisers have sometimes been accused of taking advantage of this trusting outlook. The Independent Television Commission, regulator of television advertising in the United Kingdom, has criticized advertisers for "misleadingness"—creating a wrong impression either intentionally or unintentionally—in an effort to control advertisers' use of techniques that make it difficult for children to judge the true size, action, performance, or construction of a toy.

1.Which of the following is NOT mentioned in paragraph 1 as being a difficult judgment for children to make about advertised toys?

○How big the toys are

○How much the toys cost

○What the toys can do

○How the toys are made

Paragraph 2: General concern about misleading tactics that advertisers employ is centered on the use of exaggeration. Consumer protection groups and parents believe that children are largely ill-equipped to recognize such techniques and that often exaggeration is used at the expense of product information. Claims

such as "the best" or "better than" can be subjective and misleading; even adults may be unsure as to their meaning. They represent the advertiser's opinions about the qualities of their products or brand and, as a consequence, are difficult to verify. Advertisers sometimes offset or counterbalance an exaggerated claim with a disclaimer—a qualification or condition on the claim. For example, the claim that breakfast cereal has a health benefit may be accompanied by the disclaimer "when part of a nutritionally balanced breakfast." However, research has shown that children often have difficulty understanding disclaimers: children may interpret the phrase "when part of a nutritionally balanced breakfast" to mean that the cereal is required as a necessary part of a balanced breakfast. The author George Comstock suggested that less than a quarter of children between the ages of six and eight years old understood standard disclaimers used in many toy advertisements and that disclaimers are more readily comprehended when presented in both audio and visual formats. Nevertheless, disclaimers are mainly presented in audio format only.

2. The word "Verify" in the passage is closest in meaning to

○establish the truth of

○approve of

○understand

○criticize

3.In paragraph 2, what is one reason that claims such as "the best" or "better

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than" can be misleading?

○They represent the opinions of adults, which are often different from those of children.

○They generally involve comparisons among only a small group of products.

○They reflect the attitudes of consumer protection groups rather than those of actual consumers.

○They reflect the advertiser's viewpoint about the product.

4.Cereal advertisements that include the statement "when part of a nutritionally balanced breakfast" are trying to suggest that

○the cereal is a desirable part of a healthful, balanced breakfast

○the cereal contains equal amounts of all nutrients

○cereal is a healthier breakfast than other foods are

○the cereal is the most nutritious part of the breakfast meal

5. According to paragraph 2, all of the following are true of disclaimers made in advertisements EXCEPT:

○They are qualifications or conditions put on a claim.

○They may be used to balance exaggerations.

○They are usually presented in both audio and visual formats.

○They are often difficult for children to understand.

Paragraph 3: Fantasy is one of the more common techniques in advertising

that could possibly mislead a young audience. Child-oriented advertisements are more likely to include magic and fantasy than advertisements aimed at adults. In a content analysis of Canadian television, the author Stephen Kline observed that nearly all commercials for character toys featured fantasy play. Children have strong imaginations and the use of fantasy brings their ideas to life, but children may not be adept enough to realize that what they are viewing is unreal. Fantasy situations and settings are frequently used to attract children's attention, particularly in food advertising. Advertisements for breakfast cereals have, for many years, been found to be especially fond of fantasy techniques, with almost nine out of ten including such content. Generally, there is uncertainty as to whether very young children can distinguish between fantasy and reality in advertising. Certainly, rational appeals in advertising aimed at children are limited, as most advertisements use emotional and indirect appeals to psychological states or associations.

6. The word "adept" in the passage is closest in meaning to

○responsible

○skillful

○patient

○curious

7.Paragraph 3 indicates that there is uncertainty about which of the following issues involving children and fantasy in advertising?

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○Whether children can tell if what they are seeing in an advertisement is real or fantasy

○Whether children can differentiate fantasy techniques from other techniques used in advertising

○Whether children realize how commonly fantasy techniques are used in advertising aimed at them

○Whether children are attracted to advertisements that lack fantasy

8.Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○Rational appeals in advertising are certainly limited by children's emotional immaturity and the indirect nature of their associations.

○Indirect appeals to children's psychological states or associations can limit the effectiveness of rational appeals in advertising.

○Rational appeals play a much smaller role in advertisements for children than emotional appeals and psychological associations do.

○Rational appeals in advertising aimed at children should certainly be limited until the children are emotionally and psychologically ready.

Paragraph 4: The use of celebrities such as singers and movie stars is common in advertising. The intention is for the positively perceived attributes of the celebrity to be transferred to the advertised product and for the two to become

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automatically linked in the audience's mind. In children's advertising, the celebrities are often animated figures from popular cartoons In the recent past, the role of celebrities in advertising to children has often been conflated with the concept of host selling. Host selling involves blending advertisements with regular programming in a way that makes it difficult to distinguish one from the other. Host selling occurs, for example, when a children's show about a cartoon lion contains an ad in which the same lion promotes a breakfast cereal. The psychologist Dale Kunkel showed that the practice of host selling reduced children's ability to distinguish between advertising and program material. It was also found that older children responded more positively to products in host selling advertisements.

9. The word "attributes" in the passage is closest in meaning to

○Evaluations

○Attitudes

○Actions

○Characteristics

10. In paragraph 4, why does the author mention a show about a cartoon lion in which an advertisement appears featuring the same lion character?

○To help explain what is meant by the term "host selling" and why it can be misleading to children

○To explain why the role of celebrities in advertising aimed at children has

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often been confused with host selling

○To compare the effectiveness of using animated figures with the effectiveness of using celebrities in advertisements aimed at children

○To indicate how Kunkel first became interested in studying the effects of host selling on children

Paragraph 5: Regarding the appearance of celebrities in advertisements that do not involve host selling, the evidence is mixed. Researcher Charles Atkin found that children believe that the characters used to advertise breakfast cereals are knowledgeable about cereals, and children accept such characters as credible sources of nutritional information. This finding was even more marked for heavy viewers of television. In addition, children feel validated in their choice of a product when a celebrity endorses that product. A study of children in Hong Kong, however, found that the presence of celebrities in advertisements could negatively affect the children's perceptions of a product if the children did not like the celebrity in question.

11. The word "credible" in the passage is closest in meaning to

○helpful

○believable

○valuable

○familiar

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Paragraph 3: ■ Fantasy is one of the more common techniques in advertising that could possibly mislead a young audience. ■ Child-oriented advertisements are more likely to include magic and fantasy than advertisements aimed at adults. In a content analysis of Canadian television, the author Stephen Kline observed that nearly all commercials for character toys featured fantasy play. Children have strong imaginations and the use of fantasy brings their ideas to life, but children may not be adept enough to realize that what they are viewing is unreal. Fantasy situations and settings are frequently used to attract children's attention, particularly in food advertising. Advertisements for breakfast cereals have, for many years, been found to be especially fond of fantasy techniques, with almost nine out of ten including such content. Generally, there is uncertainty as to whether very young children can distinguish between fantasy and reality in advertising. Certainly, rational appeals in advertising aimed at children are limited, as most advertisements use emotional and indirect appeals to psychological states or associations.

12. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

Another aspect of advertising that may especially influence children is fantasy.

Where would the sentence best fit? Click on a square to add the sentence to the passage.

13.Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

Advertisements can be misleading to children when the advertisements use audio and visual formats that are especially appealing to children.

●

●

●

Answer Choices

○Children may not be able to interpret exaggerated claims made by advertisers or understand the disclaimers used to offset claims.

○Although the use of celebrities is not necessarily effective in advertisements aimed at children, there is evidence that host selling can positively affect their views of a product.

○Studies show that misleading tactics are used most often in commercials for breakfast cereals, with toy commercials using such tactics only slightly less frequently.

○The use of fantasy is especially common in advertisements for children, but children may not be able to distinguish fantasy from reality.

○Very young children are particularly influenced by host selling, while slightly

older children are more readily misled by seemingly rational claims such as 'the best."

○Advertisements can be misleading to children when the advertisements use audio and visual formats that are especially appealing to children.

参考答案：

1. ○2

2. ○1

3. ○4

4. ○1

5. ○3

6. ○2

7. ○1

8.○3

9. ○4

10. ○1

11. ○2

12. ○1

13. ○1, 2, 4

参考译文

儿童和广告

儿童信任媒体中的商业广告，并且广告商因利用这种信任背景的有利条件常常受到指责。英国电视广告的调节者独立电视委员会批评广告商的误导---无论是有意还是无意的情况下创造了一个错误的印象---即广告商尽量控制对技术的使用，这样使儿童很难判断商品的真实大小，运动情况，外在表现或者如何否制造一个玩具。

人们普遍关心广告商夸大其词的误导策略。消费者保护组织和家长们相信孩子们大部分的不具备识别这种技巧的能力，并且他们相信这种夸大掩盖了相关产品信息。声称这是“最好的”或“比什么好”都是主观的和误导。即使是成年人也许也不能确定他们的意思。它们代表了广告客户对产品质量或品牌的观点，因此，它们很难被核实。广告商有时通过补偿或者免责的形式来平衡一个夸大的说辞。举个例子，声称早餐食用谷物食品对健康是有益的可能会附带一个免责声明“当早餐被部分营养平衡时”。然而，研究发现儿童常常对理解免责声明有困难：儿童解释“当早餐被部分营养平衡时”为谷类食物是均衡早餐营养的必需成份。作者 George Comstock 指出在六岁到八岁之间的儿童，其中少于四分之一的儿童理解了用于大多数的玩具中的标准的免责声明。同时，当免责声明以声音和视觉的形式同时出现时是容易被理解的。然而，它们多是以声音的形式出现。

广告中的幻想是一种非常常见的技术以此来误导一个年轻的观众。面

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向儿童的广告比面向成年的广告更有可能包含了魔力和迷幻部分。通过分析加拿大的电视内容，作者 Stephen kline 注意到几乎所有的角色玩具广告中都以幻想剧为出发点。儿童有着丰富的想象力，运用想象力把他们的想法带入了生活，但是儿童也许不能熟练的认识到他们所看到的并不是真实的。想象力的环境和背景常常用于吸引儿童的注意力，特别是食物广告。多年以来，早餐食用谷类食物的广告，被认为是特别喜爱运用想象力的技术广告，几乎十家有九家包含了这样的内容。一般的来看，幼童区别广告中的幻想和现实部分存在着不确定性。当然，当大部分的广告对儿童运用情感和对其心理状态或该团体使用间接号召力时，广告中对儿童的理性的号召力将会显得受限制。

广告中常常使用名人如歌星和电影明星。目的是将感知到的对名人的积极评价转移为对我们所广告的产品的评价，使两者在观众的脑海中自动的变得有联系。在儿童的广告中，名人常常是扮演卡通中的著名人物。最近几年,对儿童来说名人在广告中的作用已经与卡通主角销售混为一谈了。主角销售需要通过一种方法来混合常规形式的广告以此使两者区别开来比较困难。举一个出现主角销售的例子，当一个儿童展示一个广告中出现的卡通狮子时，则该狮子也在售卖谷类早餐。心理学家 Dale Kunkel 指出主角销售的实践减弱了儿童区别广告和实物本质的能力。同样发现，年龄较大的儿童对主角销售的广告反应较大。

关于名人在广告中的出现并不涉及主角销售的证据是复杂的。研究员 Charles Atkin 发现儿童相信谷物早餐广告中使用的卡通人物对谷物是很

了解的，并且，儿童接受这样的卡通人物，认为它们是营养信息的可靠来源。这一发现对沉溺电视的观众是一标示。另外，当名人赞同某一个产品并且儿童也选择这个产品时，儿童会感觉产品有效果。然而，在香港对儿童的研究发现，如果儿童不喜欢当下的名人，名人在广告中的出现可能使儿童对该产品的看法变得负面影响。

Maya Water Problems

To understand the ancient Mayan people who lived in the area that is today southern Mexico and Central America and the ecological difficulties they faced, one must first consider their environment, which we think of as “jungle" or 'tropical rainforest." This view is inaccurate, and the reason proves to be important. Properly speaking, tropical rainforests grow in high-rainfall equatorial areas that remain wet or humid all year round. But the Maya homeland lies more than sixteen hundred kilometers from the equator, at latitudes 17 to 22 degrees north, in a habitat termed a “seasonal tropical forest." That is, while there does tend to be a rainy season from May to October, there is also a dry season from January through April. If one focuses on the wet months, one calls the Maya homeland a "seasonal tropical forest"; if one focuses on the dry months, one could instead describe it as a "seasonal desert.”

From north to south in the Yucatan Peninsula, where the Maya lived, rainfall ranges from 18 to 100 inches (457 to 2,540 millimeters) per year, and the soils become thicker, so that the southern peninsula was agriculturally more productive and supported denser populations. But rainfall in the Maya homeland is unpredictably variable between years; some recent years have had three or four times more rain than other years. As a result, modern farmers attempting to grow corn in the ancient Maya homelands have faced frequent crop failures, especially in the north. The ancient Maya were presumably more experienced and did better,

but nevertheless they too must have faced risks of crop failures from droughts and hurricanes.

Although southem Maya areas received more rainfall than northern areas, problems of water were paradoxically more severe in the wet south. While that made things hard for ancient Maya living in the south, it has also made things hard for modem archaeologists who have difficulty understanding why ancient droughts caused bigger problems in the wet south than in the dry north. The likely explanation is that an area of underground freshwater underlies the Yucatan Peninsula, but surface elevation increases from north to south, so that as one moves south the land surface lies increasingly higher above the water table. In the northern peninsula the elevation is sufficiently low that the ancient Maya were able to reach the water table at deep sinkholes called cenotes, or at deep caves. In low-elevation north coastal areas without sinkholes, the Maya would have been able to get down to the water table by digging wells up to 75 feet (22 meters) deep. But much of the south lies too high above the water table for cenotes or wells to reach down to it. Making matters worse, most of the Yucatan Peninsula consists of karst, a porous sponge-like limestone terrain where rain runs straight into the ground and where little or no surface water remains available.

How did those dense southern Maya populations deal with the resulting water problem? It initially surprises us that many of their cities were not built next to the rivers but instead on high terrain in rolling uplands. The explanation is that the

Maya excavated depressions, or modified natural depressions, and then plugged up leaks in the karst by plastering the bottoms of the depressions in order to create reservoirs, which collected rain from large plastered catchment basins and stored it for use in the dry season.For example, reservoirs at the Maya city of Tikal held enough water to meet the drinking water needs of about 10,000 people for a period of 18 months. At the city of Coba the Maya built dikes around a lake in order to raise its level and make their water supply more reliable. But the inhabitants of Tikal and other cities dependent on reservoirs for drinking water would still have been in deep trouble if 18 months passed without rain in a prolonged drought. A shorter drought in which they exhausted their stored food supplies might already have gotten them in deep trouble, because growing crops required rain rather than reservoirs.

Paragraph 1: To understand the ancient Mayan people who lived in the area that is today southern Mexico and Central America and the ecological difficulties they faced, one must first consider their environment, which we think of as “jungle" or 'tropical rainforest." This view is inaccurate, and the reason proves to be important. Properly speaking, tropical rainforests grow in high-rainfall equatorial areas that remain wet or humid all year round. But the Maya homeland lies more than sixteen hundred kilometers from the equator, at latitudes 17 to 22 degrees north, in a habitat termed a “seasonal tropical forest." That is, while there does tend to be a rainy season from May to October, there is also a dry season from

January through April. If one focuses on the wet months, one calls the Maya homeland a "seasonal tropical forest"; if one focuses on the dry months, one could instead describe it as a "seasonal desert."

1. Why does the author call the Mayan homeland both a "seasonal tropical forest" and "seasonal desert"?

○To illustrate how the climate of the Mayan homeland varied from region to region

○To explain how the climate of the Mayan homeland is similar to that of a jungle or tropical rainforest

○To emphasize the vast size of the area that comprised the Mayan homeland in ancient times

○To make the point that the Mayan homeland is climatically more complex than is generally assumed

Paragraph 2: From north to south in the Yucatan Peninsula, where the Maya lived, rainfall ranges from 18 to 100 inches (457 to 2,540 millimeters) per year, and the soils become thicker, so that the southern peninsula was agriculturally more productive and supported denser populations. But rainfall in the Maya homeland is unpredictably variable between years; some recent years have had three or four times more rain than other years. As a result, modern farmers attempting to grow corn in the ancient Maya homelands have faced frequent crop failures, especially in the north. The ancient Maya were presumably more

experienced and did better, but nevertheless they too must have faced risks of crop failures from droughts and hurricanes.

2. Which of the following is NOT mentioned in paragraph 2 as a difference between the northern and southern Yucatan Peninsula?

○The annual rainfall was greater in the south.

○The population density was lower in the north.

○Agricultural productivity was greater in the south

○Rainfall was more unpredictable and variable in the south.

3. Which of the following statements about ancient and modem agriculture in the Yucatan Peninsula is supported by paragraph 2?

○Modern agricultural methods have solved many of the ancient problems of farming in the Yucatan Peninsula.

○Ancient Mayan farmers may have been somewhat more successful at farming in the Yucatan Peninsula than farmers are today.

○Farming today is easier than in the past because environmental changes in the Yucatan Peninsula have increased available rainfall

○The Yucatan soils in which ancient farmers worked were richer, more productive, and thicker than they are today.

Paragraph 3: Although southem Maya areas received more rainfall than northern areas, problems of water were paradoxically more severe in the wet south.

While that made things hard for ancient Maya living in the south, it has also made things hard for modem archaeologists who have difficulty understanding why ancient droughts caused bigger problems in the wet south than in the dry north. The likely explanation is that an area of underground freshwater underlies the Yucatan Peninsula, but surface elevation increases from north to south, so that as one moves south the land surface lies increasingly higher above the water table. In the northern peninsula the elevation is sufficiently low that the ancient Maya were able to reach the water table at deep sinkholes called cenotes, or at deep caves. In low-elevation north coastal areas without sinkholes, the Maya would have been able to get down to the water table by digging wells up to 75 feet (22 meters) deep. But much of the south lies too high above the water table for cenotes or wells to reach down to it. Making matters worse, most of the Yucatan Peninsula consists of karst, a porous sponge-like limestone terrain where rain runs straight into the ground and where little or no surface water remains available.

4. The word "paradoxically" in the passage is closest in meaning to

○usually

○surprisingly

○understandably

○predictably

5. The phrase "The likely explanation" in the passage refers to the explanation for why

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○the southern Maya areas received more rainfall than the northern areas

○modern archaeologists have difficulty understanding ancient droughts

○water problems were most severe in the wet south

○land surface in the south is so high above the water table

6. Which of the following statements about the availability of water in the Mayan homeland is supported by paragraph 3?

○The construction of wells was an uncommon practice in both the north and the south because it was too difficult to dig through the karst.

○In most areas in the north and the south, rainwater was absorbed directly into the porous karst.

○The water table was an important resource for agriculture in both the north and the south of the Yucatan Peninsula,

○The lack of surface water in both the north and the south was probably due to the fact that most of it was quickly used up for agricultural purposes.

7. According to paragraph 3, why was the southern Mayan homeland hard to farm?

○The presence of numerous sinkholes and wells interfered with farming.

○Southern soil lacked the depth crops needed for growth.

○Underground water was too far below the surface to reach.

○The presence of karst caused frequent flooding.

Paragraph 4: How did those dense southern Maya populations deal with the resulting water problem? It initially surprises us that many of their cities were not built next to the rivers but instead on high terrain in rolling uplands. The explanation is that the Maya excavated depressions, or modified natural depressions, and then plugged up leaks in the karst by plastering the bottoms of the depressions in order to create reservoirs, which collected rain from large plastered catchment basins and stored it for use in the dry season.For example, reservoirs at the Maya city of Tikal held enough water to meet the drinking water needs of about 10,000 people for a period of 18 months. At the city of Coba the Maya built dikes around a lake in order to raise its level and make their water supply more reliable. But the inhabitants of Tikal and other cities dependent on reservoirs for drinking water would still have been in deep trouble if 18 months passed without rain in a prolonged drought. A shorter drought in which they exhausted their stored food supplies might already have gotten them in deep trouble, because growing crops required rain rather than reservoirs.

8 Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○Southern Maya populations obtained the water they needed for the dry season by collecting and storing rainwater in sealed depressions.

○The Maya are credited with creating methods for modifying natural rainwater and storing it.

○Leaks in the karst caused difficulties in the creation of reservoirs, which were needed to store water for the dry season.

○Southern Mayans were more successful at collecting rain than storing it during dry seasons.

9.What can be inferred from paragraph 4 about how residents of Tikal met their needs for water and food during most periods of drought?

○They depended upon water and food that had been stored for use during the dry season.

○They obtained drinking water and water for crop irrigation from Coba dikes.

○They located their population centers near a lake where water was available for dnnking and watering crops.

○They moved locations every 18 months to find new croplands and water sources.

10. The word "prolonged" in the passage is closest in meaning to

○unusual

○unexpected

○extended

○disastrous

11. The word "exhausted" in the passage is closest in meaning to

○used up

○reduced

○wasted

○relied upon

Paragraph 1: To understand the ancient Mayan people who lived in the area that is today southern Mexico and Central America and the ecological difficulties they faced, one must first consider their environment, which we think of as “jungle" or 'tropical rainforest." ■ This view is inaccurate, and the reason proves to be important. ■ Properly speaking, tropical rainforests grow in high-rainfall equatorial areas that remain wet or humid all year round. But the Maya homeland lies more than sixteen hundred kilometers from the equator, at latitudes 17 to 22 degrees north, in a habitat termed a “seasonal tropical forest." ■ That is, while there does tend to be a rainy season from May to October, there is also a dry season from January through April. If one focuses on the wet months, one calls the Maya homeland a "seasonal tropical forest"; if one focuses on the dry months, one could instead describe it as a "seasonal desert.” ■

12. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

The difference between the two climates challenged the Maya who had to deal with both.

Where would the sentence best fit? Click on a square to add the sentence to the passage.

13.Directions: Select from the seven phrases below the phrases that correctly characterize the southern Mayan homeland and the phrases that correctly characterize the northern Mayan homeland. Drag each phrase you select into the appropriate column of the table. Two of the phrases will NOT be used. This question is worth 3 points.

Southern Mayan homeland

-
-
-

Northern Mayan homeland

-
-

Answer Choices

- City of Tikal
- Predictable rainfall
- High above water table
- Used reservoirs
- Obtained water from wells
- Dramatically improved corn crops
- Had comparatively thin layer of soil

参考答案：

1. ○4

2. ○4

3. ○2

4. ○2

5. ○3

6. ○2

7. ○3

8.○1

9. ○1

10. ○3

11. ○1

12. ○4

13. ○1, 3, 4

○5, 7

参考译文

玛雅的水源问题

为了了解生活在今天南墨西哥和中美中地区的古玛雅人种以及他们所面对的生态困境，那么我们必须先研究他们的环境，也就是今天我们所谓的“丛林”或者“热带雨林”。这种观点虽然不是很准确，但是环境因素的意义还是很重要的。严格意义上讲，热带雨林生长在赤道附近常年保持潮湿的多雨地区。但是玛雅的故地是在离赤道六百多公里的北纬 17-22 度之间，也就是通常所说的“季节性热带雨林”里。也就是说，这个地区在五月到十月是雨季，而在一月到 4 月又是旱季。如果是关注湿季的话，可以说玛雅的故地是一个“季节性丛林”，如果关注旱季的话，那玛雅的故地就可以替换并解释为“季节性沙漠”了。

玛雅人所居住的尤卡坦半岛从南向北的年降水量是从 18 英寸到 100 英寸（457 到 2540 毫米）逐级递增的，而且土地也是逐级加厚，所以半岛南部的农业生产力相对较高，相伴随的也就能养活更多的人。不过玛雅故地的跨年降雨量的变化程度是不可预测的。一些年份的降雨次数要比其他年份的多三到四次。正因如此，当现代的弄明打算在古玛雅人的故地种植棉花的时候就经常会面临种植的失败，尤其是在半岛的北部。古玛雅人也许更有经验也做得更好，但是不管怎么说他们都必须面对旱灾和飓风而导致的颗粒无收的风险。

尽管玛雅故地的南部比之北部有更多的降雨，但是在潮湿的南方，水

资源问题的矛盾性要更加尖锐。古代南部生活的玛雅人所面临的麻烦，在今天也困扰着现代考古学家，他们想不通为什么古代的旱灾的影响在湿润的南方要比干旱的北方大。一种可能季节是尤卡坦半岛的地下水资源的区域是倾斜的，但是地表的上升幅度要低于古玛雅人能挖到的含水层的深层排水口，叫做“cenote”,或者叫深层含水层。较低高度的北方沿海地区没有白税控，玛雅人应该可以借助凿井到达 75 英尺（22 米）深的地下水含水层。但是南方想要通过排水口或是凿井来到大含水层的话，深度就要深得多。更要命的是，尤卡坦半岛是由水浊石灰岩构成的，一种多孔海绵型就石灰岩地域，当雨水来临时水会笔直的流入地底并不在地表留下任何水分。

那么南部如此密集的玛雅人是如何应对水资源问题的呢？起初最令我们惊讶的是玛雅的一些城市并不是建在河边的而是建在旋转与会的高地上的。之所以这么做是因为玛雅人开凿或者改造自然的低地，与此同时通过粉刷低地的地步来堵住水蚀石灰岩的的裂口，再用它来做成水库收集雨水以备旱季之用。比如说，位于玛雅太卡城的水库的出水量可以供 10000 人在超长无雨的旱季喝上 18 个月。即使是较短的旱季他们耗费掉所储存的食物供应或许已经成为更深层次的问题，因为作物的生长需要雨水要远比水库的多。

Pastoralism in Ancient Inner Eurasia

Pastoralism is a lifestyle in which economic activity is based primarily on livestock. Archaeological evidence suggests that by 3000 B.C., and perhaps even earlier, there had emerged on the steppes of Inner Eurasia the distinctive types of pastoralism that were to dominate the region's history for several millennia. Here, the horse was already becoming the animal of prestige in many regions, though sheep, goats, and cattle could also play a vital role. It is the use of horses for transportation and warfare that explains why Inner Eurasian pastoralism proved the most mobile and the most militaristic of all major fors of pastoralism. The emergence and spread of pastoralism had a profound impact on the history of Inner Eurasia, and also, indirectly, on the parts of Asia and Europe just outside this area. In particular, pastoralism favors a mobile lifestyle, and this mobility helps to explain the impact of pastoralist societies on this part of the world.

The mobility of pastoralist societies reflects their dependence on animal-based foods. While agriculturalists rely on domesticated plants, pastoralists rely on domesticated animals. As a result, pastoraksts, like carnivores in general, occupy a higher position on the food chain. All else being equal, this means they must exploit larger areas of land than do agriculturalists to secure the same amount of food, clothing, and other necessities. So pastoralism is a more extensive lifeway than farming is. However, the larger the terrain used to support a group, the harder it is to exploit that terrain while remaining in one place. So, basic ecological

principles imply a strong tendency within pastoralist lifeways toward nomadism (a mobile lifestyle). As the archaeologist Roger Cribb puts it, 'The greater the degree of pastoralism, the stronger the tendency toward nomadism.' A modern Turkic nomad interviewed by Cribb commented: "The more animals you have, the farther you have to move.

Nomadism has further consequences. It means that pastoralist societies occupy and can influence very large territories. This is particularly true of the horse pastoralism that emerged in the Inner Eurasian steppes, for this was the most mobile of all major forms of pastoralism So, it is no accident that with the appearance of pastoralist societies there appear large areas that share similar cultural, ecological, and even linguistic features. By the late fourth millennium B.C., there is already evidence of large culture zones reaching from Eastem Europe to the western borders of Mongolia. Perhaps the most striking sign of mobility is the fact that by the third millennium B.C., most pastoralists in this huge region spoke related languages ancestral to the modem Indo-European languages. The remarkable mobility and range of pastoral societies explain, in part, why so many linguists have argued that the Indo-European languages began their astonishing expansionist career not among farmers in Anatolia (present-day Turkey), but among early pastoralists from Inner Eurasia. Such theories imply that the Indo-European languages evolved not in Neolithic (10,000 to 3,000 B.C.) Anatolia, but among the foraging communities of the cultures in the region of the Don and Dnieper rivers, which took up stock breeding and began to exploit the neighboring

steppes.

Nomadism also subjects pastoralist communities to strict rules of portability. If you are constantly on the move, you cannot afford to accumulate large material surpluses. Such rules limit variations in accumulated material goods between pastoralist households (though they may also encourage a taste for portable goods of high value such as silks or jewelry). So, by and large, nomadism implies a high degree of self-sufficiency and inhibits the appearance of an extensive division of labor. Inequalities of wealth and rank certainly exist, and have probably existed in most pastoralist societies, but except in periods of military conquest, they are normally too slight to generate the stable, hereditary hierarchies that are usually implied by the use of the term class.lnequalities of gender have also existed in pastoralist societies, but they seem to have been softened by the absence of steep hierarchies of wealth in most communities, and also by the requirement that women acquire most of the skills of men, including, often, their military skills.

Paragraph 1: Pastoralism is a lifestyle in which economic activity is based primarily on livestock. Archaeological evidence suggests that by 3000 B.C., and perhaps even earlier, there had emerged on the steppes of Inner Eurasia the distinctive types of pastoralism that were to dominate the region's history for several millennia. Here, the horse was already becoming the animal of prestige in many regions, though sheep, goats, and cattle could also play a vital role. It is the use of horses for transportation and warfare that explains why Inner Eurasian

pastoralism proved the most mobile and the most militaristic of all major fors of pastoralism. The emergence and spread of pastoralism had a profound impact on the history of Inner Eurasia, and also, indirectly, on the parts of Asia and Europe just outside this area. In particular, pastoralism favors a mobile lifestyle, and this mobility helps to explain the impact of pastoralist societies on this part of the world

1. The word “prestige” in the passage is closest in meaning to

○interest

○status

○demand

○profit

2. According to paragraph 1, what made it possible for Inner Eurasian pastoralism to become the most mobile and militaristic form of pastoralism?

○It involved the domestication of several types of animals.

○It was based primarily on horses rather than on other animals.

○It borrowed and improved upon European ideas for mobility and warfare.

○It could be adapted to a wide variety of environments.

3. The word "profound” in the passage is closest in meaning to

○strange

○positive

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○direct

○far-reaching

Paragraph 2: The mobility of pastoralist societies reflects their dependence on animal-based foods. While agriculturalists rely on domesticated plants, pastoralists rely on domesticated animals. As a result, pastoraksts, like carnivores in general, occupy a higher position on the food chain. All else being equal, this means they must exploit larger areas of land than do agriculturalists to secure the same amount of food, clothing, and other necessities. So pastoralism is a more extensive lifeway than farming is. However, the larger the terrain used to support a group, the harder it is to exploit that terrain while remaining in one place. So, basic ecological principles imply a strong tendency within pastoralist lifeways toward nomadism (a mobile lifestyle). As the archaeologist Roger Cribb puts it, 'The greater the degree of pastoralism, the stronger the tendency toward nomadism.' A modern Turkic nomad interviewed by Cribb commented: "The more animals you have, the farther you have to move.

4. In paragraph 2, why does the author contrast pastoralists with agriculturalists?

○To explain why pastoralism requires more land than agriculturalism to support basic needs

○To identify some advantages that mobile societies have over immobile societies

○To demonstrate that ecological principles that apply to pastoralism do not apply to agriculturalism

○To argue that agriculturalism eventually developed out of pastoralism

5. According to paragraph 2, pastoralists tend to

○prefer grazing their animals on agricultural lands

○consume comparatively large amounts of food and clothing

○avoid eating plant foods

○move from place to place frequently

Paragraph3: Nomadism has further consequences. It means that pastoralist societies occupy and can influence very large territories. This is particularly true of the horse pastoralism that emerged in the Inner Eurasian steppes, for this was the most mobile of all major forms of pastoralism So, it is no accident that with the appearance of pastoralist societies there appear large areas that share similar cultural, ecological, and even linguistic features. By the late fourth millennium B.C., there is already evidence of large culture zones reaching from Eastem Europe to the western borders of Mongolia. Perhaps the most striking sign of mobility is the fact that by the third millennium B.C., most pastoralists in this huge region spoke related languages ancestral to the modem Indo-European languages. The remarkable mobility and range of pastoral societies explain, in part, why so many linguists have argued that the Indo-European languages began their astonishing expansionist career not among farmers in Anatolia (present-day Turkey), but

among early pastoralists from Inner Eurasia. Such theories imply that the Indo-European languages evolved not in Neolithic (10,000 to 3,000 B.C.) Anatolia, but among the foraging communities of the cultures in the region of the Don and Dnieper rivers, which took up stock breeding and began to exploit the neighboring steppes.

6. In paragraph 3, why does the author discuss languages spoken in the region spanning from Eastern Europe to the westem borders of Mongolia?

○To emphasize the frequency with which Indo-European languages changed as a result of the mobile nature of pastoralism

○To indicate one method linguists use to determine that inhabitants of the Don and Dnieper river area had taken up stock breeding

○Provide evidence that Indo-European languages have their roots in what is now Turkey

○To provide evidence that pastorahst societies can exercise cultural influence over a large area

7 The word "striking" in the passage is closest in meaning to

○reliable

○noticeable

○convincing

○violent

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8 The word "exploit" in the passage is closest in meaning to

○use to advantage

○depart from

○pay attention to

○travel across

Paragraph 4: Nomadism also subjects pastoralist communities to strict rules of portability. If you are constantly on the move, you cannot afford to accumulate large material surpluses. Such rules limit variations in accumulated material goods between pastoralist households (though they may also encourage a taste for portable goods of high value such as silks or jewelry). So, by and large, nomadism implies a high degree of self-sufficiency and inhibits the appearance of an extensive division of labor. Inequalities of wealth and rank certainly exist, and have probably existed in most pastoralist societies, but except in periods of military conquest, they are normally too slight to generate the stable, hereditary hierarchies that are usually implied by the use of the term class. Inequalities of gender have also existed in pastoralist societies, but they seem to have been softened by the absence of steep hierarchies of wealth in most communities, and also by the requirement that women acquire most of the skills of men, including, often, their military skills.

9. According to paragraph 4, the fact that pastoralist communities are subject to “strict rules of portability” encourages such communities to

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○relocate less frequently than they would otherwise

○have households that are more or less equal in wealth

○become self-sufficient in the manufacture of silk and jewelry

○share large material surpluses with neighboring communities

10. According to paragraph 4, all of the following are true of social inequality in pastoralist societies EXCEPT:

○It exists and has existed to some degree in most pastoral societies.

○It is most marked during periods of military conquest.

○It is expressed in the form of a rigid hierarchy based largely on heredity.

○It is usually too insignificant to be discussed in terms of class differences.

11 Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○Despite the fact that wealth is relatively evenly distributed in pastoral societies, gender inequality still exists because only men can acquire military skills and social status.

○Inequalities of gender existed in pastoralist societies until most communities began to require women to possess the same skills as men and take part in the military.

○Inequalities of gender in pastoralist societies were caused by steep hierarchies of wealth and differences in military training between men and

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women.

○In pastoral societies, gender inequality is comparatively mild because wealth is relatively evenly distributed and women have to learn most of the same skills that men do.

12.Look at the four squares [■] that indicate where the following sentence could be added to the passage

There is a good reason for this.

Where would the sentence best fit? Click on a square to add the sentence to the passage.

13.Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that not presented in the passage or are minor ideas in the passage. *This question is worth 2 points.*

By 3000 B.C., a distinctive form of pastoralism had appeared on the steppes of Inner Eurasia.

●

●

●

Answer Choices

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○The domesticated horse is primarily responsible for Inner Eurasian pastoralism's success in mobility and warfare.

○As pastoralists traveled across large areas of terrain with their domesticated animals, they traded valuable material goods such as silks and jewelry.

○Because pastoralists are highly mobile, they tend to have few material possessions and can influence the culture, ecology, and language of very large areas.

○Because pastoralism requires a great deal of land to support its animal-based lifeway, pastoralists must continually relocate and have comparatively egalitarian societies.

○Most scholars now believe that Indo-European languages probably evolved during the Neolithic period in the region of the Don and Dnieper rivers.

○Pastorslist communities do not have social classes in the usual sense because they value spiritual attainment over material wealth.

参考答案：

1. ○2

2. ○2

3. ○4

4. ○1

5. ○4

6. ○4

7. ○2

8.○1

9. ○2

10. ○3

11. ○4

12. ○1

13. ○1, 3, 4

参考译文

古代内欧的畜牧

畜牧是一种经济活动建立在家畜的饲养上的生活方式。考古证据已经显示早在公元前 3000 年甚至更早的时候,位于欧洲大陆的西伯利亚大草原上已经有一些能够主导这些地区历史长达几千年的独特的畜牧类型。在这里，尽管绵羊、山羊和牛扮演了非常重要的角色，但是马已经在许多地区成为具有优势地位的动物。正是马在交通运输和战争中的使用解释了为什么欧洲大陆的畜牧主义被证明为在所有畜牧主义中最具移动性和最具军事性的一种。畜牧主义的出现和传播对欧洲内陆有一个深远的影响，同时，也间接地影响了一些在这之外的部分亚洲和欧洲地区。特别是，畜牧主义喜欢一种流动中的生活方式，这种流动性有利于解释畜牧主义社会对这部分世界的影响。

畜牧主义社会的流动性反映了他们对以动物为基础的食物的依赖。如果说农业靠在人工种植植物，那么畜牧就依赖于家养动物。因此，一般说来食肉性动物在这种食物链中占据了一个更高的位置。由于其他方面都是相同的，这就意味着如果他们要保证与农业相同的食物、衣物以及其他生活必需品，他们就必须开拓出比农业更大的区域。因此，畜牧业是一种比农业更宽泛的生活方式。但是，支撑一个族群的领土越大，在保持一个地方的同时开发这些领土的困难也就越大。所以，基本的生态学原理暗示了一种由畜牧主义生活方式向游牧主义生活方式转变的强大趋势。正如考古学家 Roger Cribb 指出的，畜牧化的程度越深，就会有一种越趋于游牧主

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义的形式。Cribb 评论一个被他观察了的现代土耳其游牧民族道，你拥有越多的动物，你就不得不流动到越远的地方。

游牧生活有一些更重大的意义。它意味着畜牧主义社会占据着并且影响着非常大的地域。特别是在欧洲内陆的西伯利亚大草原上的以马为畜牧对象的出现更具重大意义，因为它是在所有畜牧业中移动性最强的一种。所以，畜牧社会所变现出来的在较大地域中分享类似的文化、生态以及语言特点并非偶然现象。在公元前 4000 年的后期，已经有证据显示存在着一个从东欧延伸到蒙古边境的大文化圈。也许在其移动性方面最具说服力的标志是在公元前 3000 在这个区域的大部分的畜牧者都讲一种与现代印欧语系有关的古老语言。这种值得关注的移动性和畜牧社会的地理范围在某种程度上解释了很多语言学家一直争论的一个问题，那就是为什么印欧语系并不是从 Anatolia（现在的土耳其）的农民中传播开来的，而是从早期欧洲内陆的畜牧主义者中产生。这些理论暗示了印欧语系不是从新石器时代的 Antolia 发展而来,而是在 Don 和 Dnieper 流域内从事家畜养殖和开发邻近的西伯利亚大草原的畜牧社群中发展而来。

游牧主义者也用便于携带但却严格的规则下征服了畜牧主义者。如果你不断地移动，你就负担不起大量的剩余物资。这样的规则限制了畜牧主义者家用物资的多样性积累（尽管他们也鼓励积累高质量的便于携带的物品，如真丝和珠宝）。所以，大体上来说，游牧民族包含着一个高程度的自给自足社会并且限制宽泛的劳动分工。当然，不公平的财富和社会地位也同样存在，而且是存在于绝大多数的畜牧主义社会里。但是除了在军事

征服时段里，他们由于过于弱小而不能形成所想象的稳定的、世袭的统治阶级。畜牧主义社会里也同样存在性别上的不公平，但是由于在大多数社群中缺少严格的财富等级制度，并且由于妇女往往具有男子的技能所以这种不公平性被弱化了。

A Warm-Blooded Turtle

When it comes to physiology, the leatherback turtle is, in some ways, more like a reptilian whale than a turtle. It swims farther into the cold of the northern and southern oceans than any other sea turtle, and it deals with the chilly waters in a way unique among reptiles.

A warm-blooded turtle may seem to be a contradiction in terms. Nonetheless, an adult leatherback can maintain a body tem perature of between 25 and 26°C (77 - 79°F) in seawaterthat is only 8°C (46.4°F). Accomplishing this feat requires adaptations both to generate heat in the turtle' s body and to keep it from escaping into the surrounding waters. Leatherbacks apparently do not generate internal heat the way we do, or the

way birds do, as a by-product of cellular metabolism. A leatherback may be able to pick up some body heat by basking at the surface; its dark, almost black body color may help it to absorb solar radiation. However, most of its internal heat comes from the action of its muscles.

Leatherbacks keep their body heat in three different ways. The first, and simplest, is size. The bigger the animal is, the lower as surfaceto-volum e ratio; for every ounce of body mass, there is proportionately less surface through which heat can escape. *An* adult leatherback is twice the size of the biggest cheloniid sea turtles and will therefore take longer to cool off. Maintaining a high body temperature through sheer bulk is called gigantotherrny. It works for elephants, for whales, and, perhaps, it worked for many of the larger dinosaurs. It apparently works, in a smaller way, for some other sea turtles. Large loggerhead and green turtles can maintain their body temperature at a degree or two above that of the surrounding water, and gigantothermy is probably the way they do a. Muscular activity helps, too, and an actively swimming green turtle may be T C (12.6° F) warmer than the waters it swims through.

Gigantothermy, though, would not be enough to keep a leatherback warm in cold northern waters. It is not enough for whales, which supplement it with a thick layer of insulating blubber (fat).

Leatherbacks do not have blubber, but they do have a reptilian equivalent:

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thick, oil-saturated skin, with a layer of fibrous, fatty tissue just beneath a. Insulation protects the leatherback everywhere but on its head and flippers. Because the flippers are com paratively thin and blade like, they are the one part of the leatherback that is likely to become chilled. There is not much that the turtle can do about this without compromising the aerodynamic shape of the flipper. The problem is that as blood flows through the turtle's flippers, it risks losing enough heat to lower the anim al's central body temperature when (it] returns. The solution is to allow the flippers to cool down without drawing heat away from the rest of the turtle's body. The leatherback accomplishes this by arranging the blood vessels in the base of as flipper into a countercurrent exchange system.

In a countercurrent exchange system, the blood vessels carrying cooled blood from the flippers run close enough to the blood vessels carrying warm blood from the body to pick up some heat from the warmer blood vessels; thus, the heat is transferred from the outgoing to the ingoing vessels before it reaches the flipper itself.This is the same arrangement found in an old-fashioned steam radiator, in which the coiled pipes pass heat back and forth as water courses through them . The leatherback is certainly not the only animal with such an arrangement; gulls have a countercurrent exchange in their legs. That is why a gull can stand on an ice floe without freezing.

All this applies, of course, only to an adult leatherback. Hatchlings are

simply too small to conserve body heat, even with insulation and countercurrent exchange systems. We do not know how old, or how large, a leatherback has to be before it can switch from a cold-blooded to a warm-blooded mode of life. Leatherbacks reach their immense size in a much shorter time than it takes other sea turtles to grow. Perhaps their rush to adulthood is driven by a simple need to keep warm.

Paragraph 1: When it comes to physiology, the leatherback turtle is, in some ways, more like a reptilian whale than a turtle. It swims farther into the cold of the northern and southern oceans than any other sea turtle, and it deals with the chilly waters in a way unique among reptiles.

1. The phrase unique among in the passage is closest in meaning to

○natural to

○different from all other

○quite common among

○familiar to

2. What can be inferred about whales from paragraph 1?

○They are considered by some to be reptiles.

○Their bodies are built in a way that helps them manage extremely cold temperatures

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○They are distantly related to leatherback turtles.

○They can swim farther than leatherback turtles.

Paragraph 2:A warm-blooded turtle may seem to be a contradiction in terms. Nonetheless, an adult leatherback can maintain a body tem perature of between 25 and 26°C (77 - 79°F) in seawaterthat is only 8°C (46.4°F). Accomplishing this feat requires adaptations both to generate heat in the turtle's body and to keep it from escaping into the surrounding waters. Leatherbacks apparently do not generate internal heat the way we do, or the way birds do, as a by-product of cellular metabolism. A leatherback may be able to pick up some body heat by basking at the surface; its dark, almost black body color may help it to absorb solar radiation. However, most of its internal heat comes from the action of its muscles.

3. The word feat in the passage is closest in meaning to

○remarkable achievement

○common transformation

○daily activity

○complex solution

4. Paragraph 2 mentions all of the following as true about the body heat of adult leatherback turtles EXCEPT:

○Their muscles produce heat for maintaining body temperature.

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○Their clark bodies help trap solar radiation.

○Their cellular metabolism produces heat as a by-product.

○Basking at the waters surface helps them obtain heat.

Paragraph 3: Leatherbacks keep their body heat in three different ways. The first, and simplest, is size. The bigger the animal is, the lower as surface-to-volum e ratio; for every ounce of body mass, there is proportionately less surface through which heat can escape. *An* adult leatherback is twice the size of the biggest cheloniid sea turtles and will therefore take longer to cool off. Maintaining a high body temperature through sheer bulk is called gigantotherrny. It works for elephants, for whales, and, perhaps, it worked for many of the larger dinosaurs. It apparently works, in a smaller way, for some other sea turtles. Large loggerhead and green turtles can maintain their body temperature at a degree or two above that of the surrounding water, and gigantothermy is probably the way they do a. Muscular activity helps, too, and an actively swimming green turtle may be T C (12.6° F) warmer than the waters it swims through.

5. The word bulk in the passage is closest in meaning to

○strength

○effort

○activity

○mass

Paragraph 4: Gigantothermy, though, would not be enough to keep a leatherback warm in cold northern waters. It is not enough for whales, which supplement it with a thick layer of insulating blubber (fat).

Paragraph 5: Leatherbacks do not have blubber, but they do have a reptilian equivalent: thick, oil-saturated skin, with a layer of fibrous, fatty tissue just beneath a. Insulation protects the leatherback everywhere but on its head and flippers. Because the flippers are com paratively thin and blade like, they are the one part of the leatherback that is likely to become chilled. There is not much that the turtle can do about this without compromising the aerodynamic shape of the flipper. The problem is that as blood flows through the turtle's flippers, it risks losing enough heat to lower the anim al's central body temperature when it returns. The solution is to allow the flippers to cool down without drawing heat away from the rest of the turtle's body. The leatherback accomplishes this by arranging the blood vessels in the base of as flipper into a countercurrent exchange system.

6. The word it in paragraph 4 refers to

○the problem

○blood

○the turtle

○body temperature

7. According to paragraph 4, which of the following features enables the leatherback turtle to stay warm?

○An insulating layer of blubber

○A thick, oily skin covering fatty tissue

○The aerodynamic shape of its flippers

○A well-insulated head

Paragraph 6: In a countercurrent exchange system , the blood vessels carrying cooled blood from the flippers run close enough to the blood vessels carrying warm blood from the body to pick up some heat from the warmer blood vessels; thus, the heat is transferred from the outgoing to the ingoing vessels before it reaches the flipper itself. This is the same arrangement found in an old-fashioned steam radiator, in which the coiled pipes pass heat back and forth as water courses through them. The leatherback is certainly not the only animal with such an arrangement; gulls have a countercurrent exchange in their legs. That is why a gull can stand on an ice floe without freezing.

8. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○In a turtle's countercurrent exchange system, outgoing vessels lie near enough to ingoing ones that heat can be exchanged from the former to the latter before reaching the turtle' s flippers.

○Within the turtle' s flippers, there is a countercurrent exchange system that allows colder blood vessels to absorb heat from nearby warmer blood vessels and then return warmed blood to the turtle's body.

○In a countercurrent exchange system, a turtle can pick up body heat from being close enough to other turtles, thus raising its blood temperature as it passes them.

○When a turtle places its flippers close to its body,it is able to use its countercurrent exchange system to transfer heat from the warmer blood vessels in its body to the cooler blood vessels in its flippers.

9. Why does the author mention old-fashioned steam radiator in the discussion of countercurrent exchange systems?

○To argue that a turtle' s central heating system is not as highly evolved as that of other warmblooded animals

○To provide a useful comparison with which to illustrate how a countercurrent exchange system works

○To suggest that steam radiators were modeled after the sophisticated heating system of turtles

○To establish the importance of the movement of water in countercurrent exchange systems

10. The phrase courses through in the passage is closest in meaning to

○rises through

○heats up in

○runs through

○collects in

11. According to paragraph 6, which of the following statements is most accurate about young leatherback turtles?

○They lack the countercurrent exchange systems that develop in adulthood.

○Their rate of growth is slower than that of other sea turtles.

○They lose heat easily even with insulation and countercurrent exchange systems.

○They switch between cold-blooded and warm-blooded modes throughout their hatchling stage.

Paragraph 3: Leatherbacks keep their body heat in three different ways. The first, and simplest, is size. The bigger the animal is, the lower as surface-to-volum e ratio; for every ounce of body mass, there is proportionately less surface through which heat can escape. *An* adult leatherback is twice the size of the biggest cheloniid sea turtles and will therefore take longer to cool off. Maintaining a high body temperature through sheer bulk is called gigantotherrny. ■ It works for elephants, for whales, and, perhaps, it worked for many of the larger dinosaurs. ■ It apparently works, in a smaller way, for some other sea turtles. ■ Large loggerhead and green turtles can maintain

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their body temperature at a degree or two above that of the surrounding water, and gigantothermy is probably the way they do a. ■ Muscular activity helps, too, and an actively swimming green turtle may be T C (12.6° F) warmer than the waters it swims through.

12. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

However, these animals have additional means of staying warm.

Where would the sentence best fit?

13. **Directions: An** introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the **THREE** answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. ***This question is worth 2 points.***

Contrary to what we would expect of reptiles. the leatherback turtle is actually warm-blooded.

-
-
-

Answer Choices

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○Even though they swim into cold ocean waters, leatherbacks maintain their body heat in much the same way as sea turtles in warm southern oceans do.

○The leatherback turtle uses a countercurrent exchange system in order to keep the flippers from drawing heat away from the rest of the body.

○The shape of the leatherback turtle's flippers is especially important in maintaining heat in extremely cold northern waters.

○The leatherback turtle is able to maintain body heat through sheer size.

○Leatherbacks have an insulating layer that can be considered the reptilian version of blubber.

○Young leatherbacks often do not survive to adulthood because they are not able to switch from a cold-blooded way of life to a warm-blooded one quickly enough.

参考答案：

1. ○2

2. ○2

3. ○1

4. ○3

5. ○4

6. ○2

7. ○2

8.○1

9. ○2

10. ○3

11. ○3

12. ○4

13. ○2, 4, 5

参考译文

温血海龟

当谈及到生理学时，棱皮龟在某些方面上更像一个爬行类的鲸鱼。它比别的海龟更能游向寒冷的北部和南部海洋，并且和其他爬行类动物相比，它们在应对寒冷的水域时有其独特的方式。

一只温血海龟看起来似乎是一个矛盾的术语。尽管如此，一只成年棱皮龟在只有 8 摄氏度的海水中可以维持体温在 25-26 摄氏度之间。要完成这一过程，棱皮龟即需要调节它所产生的体温，又要防止它的温度散失到周围的水域中。棱皮龟产生内部热量显然不用像我们，鸟类一样，而是其细胞新陈代谢的副产品。一只棱皮龟也许可以通过晒太阳来收集身体所需的热量。其深色近乎黑色的体色帮助其吸收太阳光的辐射。然而，它的大部分内部热量来自于它的肌肉运动。

棱皮龟用三种方法保存他们的热量。热量保持的最简单第一种—动物体积的大小。动物越大，表面和体积的比率越小。对于体重的每一盎司来讲，该动物表面积越少热量流失的越少。成年棱皮龟是最大的 cheloniid 海龟的两倍，因此它需要较长的时间来降温。完全靠体积维持体温的方法叫 gigantotherrny。大象、鲸鱼也许包括很多恐龙也是通过这种方法来保持体温的。对其它海龟而言，在一定程度上也是存在着这种现象。大龟和绿海龟可以维持它们的体温与周围水温一样，或者高于它们周围的水温。Gigantotherrny 可能是它们用的方法，肌肉运动也是有助于维持体温的。

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一个积极游水的绿海龟身上的温度可能比它所游区域温度高 12.6 华氏度。

然而，棱皮龟不能通过 Gigantothermy 来维持其在寒冷的北部水域所需要的所有温度。同样，对于通过厚厚的绝缘脂来维持体温的鲸鱼来说也是不够的。

棱皮龟没有鲸鱼那样的脂肪，但是它们和爬行类的动物有着类似结构：拥有厚厚的充满饱和的油质皮肤，皮肤下有一个纤维层，而脂肪组织在这个纤维层下面。除了头部和鳍外，这个结构可以保护它们的所有部位。因为棱皮龟有着相对较薄且像刀片的鳍，它们有可能被冻住。没有许多海龟能在不损害其鳍部空气动力学外形下可以做到这些。问题是随着血液流经海龟的鳍部时，它加大了损失的热量，当返回时降低了动物的核心体温。解决办法是在身体其余部分的热量还没有消散前，允许鳍部降低温度。棱皮龟通过将血管安置在鳍的基础部分来完成这一逆流交换循环系统。

在逆流交换循环系统中，血管将冷却的血液从鳍部带来与血管从身体它处带来的温热的血液进行交换。因此在到达鳍部前，热量通过流进的血液和流出的血液完成了热量转移。在老式蒸汽式暖气片上有着相同的布置。当水通过这些盘绕的管子时热量进行了交换。棱皮龟并不是唯一一个拥有这种功能的动物。海鸥在腿部有一个逆流交换循环系统。这就是为什么海鸥可以站在冰川上而不被冻结。

当然，这些只适用于成年的棱皮龟。刚孵化的棱皮龟太小，即使它们

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拥有绝缘层和逆流交换循环系统也不能保存身体的温度。我们不知道棱皮龟要到多大年龄或者多大尺寸才能从一个冷血动物向一个温血动物转变。然而，棱皮龟长成巨大的身躯的时间要比其它海龟所用的时间较短。棱皮龟也许是为了保暖才向成年过渡的。

Mass Extinctions

Cases in which many species become extinct within a geologically short interval of time are called mass extinctions. There was one such event at the end of the Cretaceous period (around 70 million years ago). There was another, even larger, mass extinction at the end of the Permian period (around 250 million years ago). The Permian event has attracted much less attention than other mass extinctions because mostly unfamiliar species perished at that time.

The fossil record shows at least five mass extinctions in which many families of marine organisms died out. The rates of extinction happening today are as great as the rates during these mass extinctions. Many scientists have therefore concluded that a sixth great mass extinction is currently in progress.

What could cause such high rates of extinction? There are several hypotheses, including warming or cooling of Earth, changes in seasonal fluctuations or ocean currents, and changing positions of the continents. Biological hypotheses include ecological changes brought about by the evolution of cooperation between insects and flowering plants or of bottom-feeding predators in the oceans. Some of the proposed mechanisms required a very brief period during which all extinctions suddenly took place; other mechanisms would be more likely to have taken place more gradually, over an extended period, or at different times on different continents. Some hypotheses fad to account for simultaneous extinctions on land

and in the seas. Each mass extinction may have had a different cause. Evidence points to hunting by humans and habitat destruction as the likely causes for the current mass extinction.

American paleontologists David Raup and John Sepkoski, who have studied extinction rates in a number of fossil groups, suggest that episodes of increased extinction have recurred periodically, approximately every 26 million years since the mid-Cretaceous period. The late Cretaceous extinction of the dinosaurs and am monoids was just one of the more drastic in a whole series of such recurrent extinction episodes. The possibility that mass extinctions may recur periodically has given rise to such hypotheses as that of a companion star with a long-period orbit deflecting other bodies from their normal orbits, making some of them fall to Earth as meteors and causing widespread devastation upon impact.

Of the various hypotheses attempting to account for the late Cretaceous extinctions, the one that has attracted the most attention in recent years is the asteroid-impact hypothesis first suggested by Luis and Walter Alvarez. According to this hypothesis, Earth collided with an asteroid with an estimated diameter of 10 kilometers, or with several asteroids, the combined mass of which was comparable. The force of collision spewed large amounts of debris into the atmosphere, darkening the skies for several years before the finer particles settled. The reduced level of photosynthesis led to a massive decline in plant life of all kinds, and this caused massive starvation first of herbivores and subsequently of

carnivores. The mass extinction would have occurred very suddenly under this hypothesis.

One interesting test of the Alvarez hypothesis is based on the presence of the rare-earth element iridium (Ir). Earth' s crust contains very little of this element, but most asteroids contain a lot more. Debris thrown into the atmosphere by an asteroid collision would presumably contain large amounts of iridium, and atmospheric currents would carry this material all over the globe. A search of sedimentary deposits that span the boundary between the Cretaceous and Tertiary periods shows that there is a dramatic increase in the abundance of iridium briefly and precisely at this boundary. This iridium anomaly offers strong support for the Alvarez hypothesis even though no asteroid itself has ever been recovered.

An asteroid of this size would be expected to leave an immense crater, even if the asteroid itself was disintegrated by the impact. The intense heat of the impact would produce heat-shocked quartz in many types of rock. Also, large blocks thrown aside by the impact would form secondary craters surrounding the main crater. To date, several such secondary craters have been found along Mexico's Yucatan Peninsula, and heat-shocked quartz has been found both in Mexico and in Haiti. A location called Chicxulub, along the Yucatan coast, has been suggested as the primary impact site.

Paragraph 1: Cases in which many species become extinct within a geologically short interval of time are called mass extinctions. There was one such event at the end of the Cretaceous period (around 70 million years ago). There was another, even larger, mass extinction at the end of the Perm ian period (around 250 million years ago). The Permian event has attracted much less attention than other mass extinctions because mostly unfamiliar species perished at that time.

1. Paragraph 1 supports which of the following statements about mass extinctions?

○They take place over a period of 70 million years.

○They began during the Cretaceous period.

○They eliminate many animal species that exist at the time they occur.

○They occur every 250 million years.

Paragraph 2: The fossil record shows at least five mass extinctions in which many families of marine organisms died out. The rates of extinction happening today are as great as the rates during these mass extinctions. Many scientists have therefore concluded that a sixth great mass extinction is currently in progress.

2. According to paragraph 2, scientists base their belief that a mass extinction is going on at present on which of the following?

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○The speed with which mass extinctions are happening today is similar to the speed of past extinctions.

○The number of species that have died out since the last extinction event is extremely large.

○Mass extinctions occur with regularity and it is time for another one.

○Fossil records of many marine species have disappeared.

Paragraph 3: What could cause such high rates of extinction? There are several hypotheses, including warming or cooling of Earth, changes in seasonal fluctuations or ocean currents, and changing positions of the continents. Biological hypotheses include ecological changes brought about by the evolution of cooperation between insects and flowering plants or of bottom-feeding predators in the oceans. Some of the proposed mechanisms required a very brief period during which all extinctions suddenly took place; other mechanisms would be more likely to have taken place more gradually, over an extended period, or at different times on different continents. Some hypotheses fad to account for simultaneous extinctions on land and in the seas. Each mass extinction may have had a different cause. Evidence points to hunting by humans and habitat destruction as the likely causes for the current mass extinction.

3. The word extended in the passage is closest in meaning to

○specific

○unlimited

○reasonable

○long

4. According to paragraph 3, each of the following has been proposed as a possible cause of mass extinctions EXCEPT

○habitat destruction

○continental movement

○fierce interspecies competition

○changes in Earth's tem perature

5. Paragraph 3 supports which of the following ideas about mass extinctions?

○Scientists know the exact causes of most mass extinctions.

○Mass extinctions are unlikely to happen again in the future.

○Insects, flowering plants, and bottom-feeding predators in the oceans tend to be the first organisms to dgappear during episodes of mass extinctions.

○Some mass extinctions occurred on land and in the seas at the same time.

paragraph 4: American paleontologists David Raup and John Sepkoski, who have studied extinction rates in a number of fossil groups, suggest that episodes of increased extinction have recurred periodically, approximately every 26 million years since the mid-Cretaceous period. The late Cretaceous extinction of the dinosaurs and am monoids was just one of the more drastic in a whole series of such recurrent extinction episodes. The possibility that mass extinctions may

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recur periodically has given rise to such hypotheses as that of a companion star with a long-period orbit deflecting other bodies from their normal orbits, making some of them fall to Earth as meteors and causing widespread devastation upon impact.

6. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○Based on their studies of extinction rates of numerous fossil groups, paleontologists David Raup and John Sepkoski have determined that mass extinctions occur about every 26 million years.

○David Raup and John Sepkoski studied extinction rates of numerous fossil groups and suggest that mass extinctions during the Cretaceous period continued for 26 million years.

○Studies that paleontologists David Raup and John Sepkoski conducted of various fossil groups have revealed that extinction rates have increased over the past 26 million years.

○The studies conducted by paleontologists David Raup and John Sepkoski of the fossil remains of species suggest that the extinction rate of species started to increase by the middle of the Cretaceous period.

7. According to paragraph 4, what aspect of extinction episodes does the companion-star hypothesis supposedly clarify?

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○Their location

○Their frequency

○Their duration

○Their severity

Paragraph 5: Of the various hypotheses attempting to account for the late Cretaceous extinctions, the one that has attracted the most attention in recent years is the asteroid-impact hypothesis first suggested by Luis and Walter Alvarez. According to this hypothesis, Earth collided with an asteroid with an estimated diameter of 10 kilometers, or with several asteroids, the combined mass of which was comparable. The force of collision spewed large amounts of debris into the atmosphere, darkening the skies for several years before the finer particles settled. The reduced level of photosynthesis led to a massive decline in plant life of all kinds, and this caused massive starvation first of herbivores and subsequently of carnivores. The mass extinction would have occurred very suddenly under this hypothesis.

8. The phrase account for in the passage is closest in meaning to

○describe

○challenge

○explain

○test

Paragraph 6: One interesting test of the Alvarez hypothesis is based on the presence of the rare-earth element iridium (Ir). Earth's crust contains very little of this element, but most asteroids contain a lot more. Debris thrown into the atmosphere by an asteroid collision would presumably contain large amounts of iridium, and atmospheric currents would carry this material all over the globe. A search of sedimentary deposits that span the boundary between the Cretaceous and Tertiary periods shows that there is a dramatic increase in the abundance of iridium briefly and precisely at this boundary. This iridium anomaly offers strong support for the Alvarez hypothesis even though no asteroid itself has ever been recovered.

9. According to paragraph 6, what made iridium a useful test of the Alvarez hypothesis?

○Its occurrence in a few locations on Earth against several locations on other planets

○Its occurrence in limited quantities on Earth against its abundance in asteroids

○Its ability to remain solid at extremely high temperatures

○Its ease of detection even in very small amounts

10. In stating that no asteroid itself has ever been recovered the author emphasizes which of the following?

○The importance of the indirect evidence for a large asteroid

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○The fact that no evidence supports the asteroid- impact hypothesis

○The reason many researchers reject the Alvarez hypothesis

○The responsibility of scientists for not making the effort to discover the asteroid itself

Paragraph 7: An asteroid of this size would be expected to leave an immense crater, even if the asteroid itself was disintegrated by the impact. The intense heat of the impact would produce heat-shocked quartz in many types of rock. Also, large blocks thrown aside by the impact would form secondary craters surrounding the main crater. To date, several such secondary craters have been found along Mexico's Yucatan Peninsula, and heat-shocked quartz has been found both in Mexico and in Haiti. A location called Chicxulub, along the Yucatan coast, has been suggested as the primary impact site.

11. The word intense in the passage is closest in meaning to

○sudden

○unusual

○immediate

○extreme

12. What is the purpose of paragraph 7 in the passage?

○It proposes a decisive new test of the Alvarez hypothesis.

○It presents additional supporting evidence for the Alvarez hypothesis.

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○It explains why evidence relating to the Alvarez hypothesis is hard to find.

○It shows how recent evidence has raised doubts about the Alvarez hypothesis

Paragraph 1: ■ Cases in which many species become extinct within a geologically short interval of time are called mass extinctions. ■ There was one such event at the end of the Cretaceous period (around 70 million years ago). ■ There was another, even larger, mass extinction at the end of the Perm ian period (around 250 million years ago). ■ The Permian event has attracted much less attention than other mass extinctions because mostly unfamiliar species perished at that time.

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

In general, it is believed that these two extinctions resulted from drastic environmental changes that followed meteorite impacts or massive volcanic eruptions.

Where would the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

There have been many attempts to explain the causes of mass extinctions.

-
-
-

Answer Choices

○Asteroid impacts, evolutionary developments, and changes in Earth' s climate and in the positions of the continents have all been proposed as possible causes of mass extinctions.

○Researchers have observed 26-million-year cycles in extinction rates of a number of fossil groups that could all be attributed to the same cause.

○According to the Alvarez hypothesis, much of the iridium originally present on Earth was thrown into the atmosphere as a result of an asteroid impact that also caused a mass extinction.

○The unusual distribution of iridium on Earth and the presence of craters and heat-shocked quartz are central to the theory that an asteroid impact caused the late Cretaceous event.

○The collision between Earth and a large asteroid resulted in massive damage and generated enough heat to cause irreversible changes in Earth' s atmosphere.

○There was a particularly large mass extinction that occurred around 250 million years ago at the end of the Permian period, whose cause could not be determined.

参考答案：

1. ○3

2. ○1

3. ○4

4. ○3

5. ○4

6. ○1

7. ○2

8.○3

9. ○2

10. ○1

11. ○4

12. ○3

13. ○4

14. ○1, 2, 4

参考译文

大规模物种灭绝

在短短的地质时间间隔内有许大量物种灭绝，这些现象就被称为大规模物种灭绝。在 白垩纪时期后期（大约七千万年前）曾经发生过一次大规模物种灭绝。在二叠纪时期后期（大约两亿五千万年前）又发生过一次规模更大的大规模物种灭绝。由于当时消失的物种大部分是人们不熟悉的，人们对二叠纪时期的这次大规模物种灭绝的关注远远不如其他几次大规模物种灭绝。

化石记录显示，至少发生过五次大规模物种灭绝，造成了大批海洋生物物种灭绝。如今物种灭绝的机率和以往那五次大规模物种灭绝时期的几率一样高。因此许多科学家得出结论：第六次大规模物种灭绝即将到来。

是什么导致了如此高的物种灭绝率呢？有几种假说，包括：地球变暖或变冷；季节的变动或洋流的变化；大陆位置移动。生物假说包括：由昆虫与开花植物之间合作式进化或海洋底层肉食动物进化引起的生态变化；这些生物机制，有些在极短的时间内就会灭绝，而有些则很有可能经过长时期在不同时代或不同大陆缓慢地进行的。有些假说倾向于解释在陆地和海洋同时发生的物种灭绝。可能每次大规模物种灭绝都有不同的原因。但是证据指出，人类狩猎以及人类对栖息地地破坏很可能是当前大规模物种灭绝的原因。

美国古生物学家 David Raup 和 John Sepkoski 曾经在大量的化石群里面研究了物种灭绝的机率。他们指出，自从白垩纪时期中期以来，物种灭绝的增加大约每两千六百万年就会定期复发一次。白垩纪时期后期的恐龙和菊石（一种已灭绝的动物）的灭绝仅仅是一系列此类周期性物种灭绝中更为剧烈的一次。大规模物种灭绝可能会再次定期出现的可能性引起了这样的假想：一个长周期轨道的的伴星从正常轨道偏向其他天体，造成某些天体，比如流星掉落到地球，在撞击的时候造成大范围的破坏。

在各种试图解释白垩纪时期后期物种灭绝的假说中，近年来最受瞩目的是由 Luis 和 Walter Alvarez 最先提出的小行星撞击假说。根据这个假说，地球与一个直径大约为 10 公里的小行星或者与几个小行星。碰撞的力量把大量碎片喷射到大气中，在这些小颗粒沉淀之前能够把天空掩盖上好几年。减弱的光合作用会造成各种植物的生命大规模的下降。这首先会造成大规模的草食动物饿死，接着就是大规模肉食动物饿死。按照这种假说，大规模物种灭绝就会突然间发生。

Alvarez 假说的一个有趣的检验是基于稀土元素铱的存在。这种元素在地壳中的含量很少，但是在大多数小行星中的含量却多得多。小行星碰撞所放射到大气中的碎片可能会含有大量的铱元素，并且大气流会把这些物质带到全球各地。一个关于跨越白垩纪时期与第三纪时期的沉积物的搜索显示：在这两个时期的交接时期，铱元素的含量急剧增加。即使从没发现过撞击的小行星，铱元素异常却为 Alvarez 假说提供了有力支持。

按理说，若大一个小行星，即使受到冲击变得粉身碎骨也会留下一个巨大的陨石坑的。撞击所释放的极度高温让许多种岩石形成热冲击石英。撞击也会把一些大石块抛出去，在主要陨石坑周围形成次级陨石坑。迄今为止，人们已经在墨西哥尤卡坦半岛附近找到了一些此类次级陨石坑。并且还在海地和墨西哥找到了热冲击石英。尤卡坦沿海一个叫做 Chicxulub 的地方，曾被当做主要的撞击点。

Glacier Formation

Glaciers are slowly moving masses of ice that have accumulated on land in areas where more snowfalls during a year than melts. Snowfalls as hexagonal crystals, but once on the ground, snow is soon transformed into a compacted mass of smaller, rounded grains. As the air space around them is lessened by compaction and melting, the grains become denser. With further melting, refreezing, and increased weight from newer snowfall above, the snow reaches a granular recrystallized stage intermediate between flakes and ice known as firn. With additional time, pressure, and refrozen meltwater from above, the small firn granules become larger, interlocked crystals of blue glacial ice. When the ice is thick enough, usually over 30 meters, the weight of the snow and firn will cause the ice crystals toward the bottom to become plastic and to flow outward or downward from the area of snow accumulation.

Glaciers are open systems, with snow as the system's input and meltwater as the system’s main output. The glacial system is governed by two basic climatic variables: precipitation and temperature. For a glacier to grow or maintain its mass, there must be sufficient snowfall to match or exceed the annual loss through melting, evaporation, and calving, which occurs when the glacier loses solid chunks as icebergs to the sea or to large lakes. If summer temperatures are high for too long, then all the snowfall from the previous winter will melt. Surplus snowfall is essential for a glacier to develop. A surplus

allows snow to accumulate and for the pressure of snow accumulated over the years to transform buried snow into glacial ice with a depth great enough for the ice to flow. Glaciers are sometimes classified by temperature as faster-flowing temperate glaciers or as slower-flowing polar glaciers.

Glaciers are part of Earth's hydrologic cycle and are second only to the oceans in the total amount of water contained. About 2 percent of Earth's water is currently frozen as ice. Two percent may be a deceiving figure, however, since over 80 percent of the world's freshwater is locked up as ice in glaciers, with the majority of it in Antarctica. The total amount of ice is even more awesome if we estimate the water released upon the hypothetical melting of the world's glaciers. Sea level would rise about 60 meters. This would change the geography of the planet considerably. In contrast, should another ice age occur, sea level would drop drastically. During the last ice age, sea level dropped about 120 meters.

When snowfalls on high mountains or in polar regions, it may become part of the glacial system. Unlike rain, which returns rapidly to the sea or atmosphere, the snow that becomes part of a glacier is involved in a much more slowly cycling system. Here water may be stored in ice form for hundreds or even hundreds of thousands of years before being released again into the liquid water system as meltwater. In the meantime', however, this ice is not static. Glaciers move slowly across the land with tremendous energy, carving into even the hardest rock formations and thereby reshaping the landscape as they engulf,

push, drag, and finally deposit rock debris in places far from its original location. As a result, glaciers create a great variety of landforms that remain long after the surface is released from its icy covering.

Throughout most of Earth's history, glaciers did not exist, but at the present time about 10 percent of Earth's land surface is covered by glaciers. Present-day glaciers are found in Antarctica, in Greenland, and at high elevations on all the continents except Australia. In the recent past, from about 2.4 million to about 10,000 years ago, nearly a third of Earth's land area was periodically covered by ice thousands of meters thick. In the much more distant past, other ice ages have occurred.

Paragraph1: Glaciers are slowly moving masses of ice that have accumulated on land in areas where more snowfalls during a year than melts. Snowfalls as hexagonal crystals, but once on the ground, snow is soon transformed into a compacted mass of smaller, rounded grains. As the air space around them is lessened by compaction and melting, the grains become denser. With further melting, refreezing, and increased weight from newer snowfall above, the snow reaches a granular recrystallized stage intermediate between flakes and ice known as firn. With additional time, pressure, and refrozen meltwater from above, the small firn granules become larger, interlocked crystals of blue glacial ice. When the ice is thick enough, usually over 30 meters,

the weight of the snow and firn will cause the ice crystals toward the bottom to become plastic and to flow outward or downward from the area of snow accumulation.

1. The word interlocked in the passage is closest in meaning to

○intermediate

○linked

○frozen

○fully developed

2. According to paragraph 1, which of the following does NOT describe a stage in the development of firn?

○Hexagonal crystals become larger and interlock to form a thick layer.

○Snow crystals become compacted into grains.

○Granules recrystallize after melting, refreezing, and further compaction.

○Grains become denser owing to reduced air space around them.

Paragraph2: Glaciers are open systems, with snow as the system's input and meltwater as the system' s main output. The glacial system is governed by two basic climatic variables: precipitation and temperature. For a glacier to grow or maintain its mass, there must be sufficient snowfall to match or exceed the annual loss through melting, evaporation, and calving, which occurs when the glacier loses solid chunks as icebergs to the sea or to large lakes. If summer

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temperatures are high for too long, then all the snowfall from the previous winter will melt. Surplus snowfall is essential for a glacier to develop. A surplus allows snow to accumulate and for the pressure of snow accumulated over the years to transform buried snow into glacial ice with a depth great enough for the ice to flow. Glaciers are sometimes classified by temperature as faster-flowing temperate glaciers or as slower-flowing polar glaciers.

3. The word match in the passage is closest in meaning to

○measure

○enlarge

○approximate

○equal

4. The word transform in the passage is closest in meaning to

○break

○push

○change

○extend

5. According to paragraph 2, surplus snow affects a glacier in all the following ways EXCEPT:

○It provides the pressure needed to cause glacial ice to flow.

○It offsets losses of ice due to melting, evaporation, and calving.

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○It brings about the formation of fern in the snow it buries.

○It results in temperate glaciers that are thicker than polar glaciers.

6. Paragraph 2 implies that which of the following conditions produces the fastest moving glaciers?

○A climate characteristic of the polar regions

○A thick layer of ice in a temperate climate F Long,

○Warm summers

○Snow, firm and ice that have been buried for several years

Paragraph3: Glaciers are part of Earth's hydrologic cycle and are second only to the oceans in the total amount of water contained. About 2 percent of Earth's water is currently frozen as ice. Two percent may be a deceiving figure, however, since over 80 percent of the world's freshwater is locked up as ice in glaciers, with the majority of it in Antarctica. The total amount of ice is even more awesome if we estimate the water released upon the hypothetical melting of the world's glaciers. Sea level would rise about 60 meters. This would change the geography of the planet considerably. In contrast, should another ice age occur, sea level would drop drastically. During the last ice age, sea level dropped about 120 meters.

7. The word deceiving in the passage is closest in meaning to

○approximate

○exaggerated

○unusual

○misleading

8. Why does the author consider the hypothetical melting of the world's glaciers?

○To contrast the effects of this event with the opposite effects of a new ice age

○To emphasize how much water is frozen in glaciers

○To illustrate the disastrous effects of a warming trencl

○To support the claim that glaciers are part of Earth' s hydrologic cycle

9. The discussion in paragraph 3 answers all the following questions EXCEPT:

○Where is most of Earth's freshwater?

○What effect would a new ice age have on sea levels?

○What is the total amount of water in Earth's oceans?

○How much of Earth's water is in ice?

Paragraph4: When snowfalls on high mountains or in Polar Regions, it may become part of the glacial system. Unlike rain, which returns rapidly to the sea or atmosphere, the snow that becomes part of a glacier is involved in a much more slowly cycling system. Here water may be stored in ice form for hundreds

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or even hundreds of thousands of years before being released again into the liquid water system as meltwater. In the meantime', however, this ice is not static. Glaciers move slowly across the land with tremendous energy, carving into even the hardest rock formations and thereby reshaping the landscape as they engulf, push, drag, and finally deposit rock debris in places far from its original location. As a result, glaciers create a great variety of landforms that remain long after the surface is released from its icy covering.

10. The word static in the passage is closest in meaning to

○unchanging

○usable

○thick

○harmless

11. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

○As a glacier moves, it leaves behind rock formations that have been engulfed, pushed, and dragged by the glacier.

○Glaciers reshape the landscape by carving into rock and transporting the resulting debris to distant locations.

○Glaciers carve the hardest rock formations with great energy and slowly reshape them into debris.

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○The tremendous energy of slowly moving glaciers transports and finally deposits rock debris into large rock formations.

Parargraph5: Throughout most of Earth's history, glaciers did not exist, but at the present time about 10 percent of Earth's land surface is covered by glaciers. Present-day glaciers are found in Antarctica, in Greenland, and at high elevations on all the continents except Australia. In the recent past, from about 2.4 million to about 10,000 years ago, nearly a third of Earth's land area was periodically covered by ice thousands of meters thick. In the much more distant past, other ice ages have occurred.

12. According to paragraph 5, in what way is the present time unusual in the history of Earth?

○There are glaciers.

○More land is covered by glaciers than at anytime in the past.

○There is no ice age.

○No glaciers are found in Australia.

Paragraph1: Glaciers are slowly moving masses of ice that have accumulated on land in areas where more snowfalls during a year than melts. Snowfalls as hexagonal crystals, but once on the ground, snow is soon transformed into a compacted mass of smaller, rounded grains. ■ As the air space around them is lessened by compaction and melting, the grains become

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denser. ■ With further melting, refreezing, and increased weight from newer snowfall above, the snow reaches a granular recrystallized stage intermediate between flakes and ice known as firn. ■ With additional time, pressure, and refrozen meltwater from above, the small firn granules become larger, interlocked crystals of blue glacial ice. ■ When the ice is thick enough, usually over 30 meters, the weight of the snow and firn will cause the ice crystals toward the bottom to become plastic and to flow outward or downward from the area of snow accumulation.

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

Firn has the appearance of wet sugar, but it is almost as hard as ice.

Where would the sentence best fit?

14. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the **THREE** answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

Glaciers are part of Earth's hydrologic cycle.

●

●

●

Answer Choices

○Glaciers, which at present contain 80 percent of Earth's freshwater, form when accumulated snow is compressed and recrystallized into ice over a period of years.

○When there are glaciers on Earth, water is cycled through the glacier system but the cycle period may be hundreds of thousands of years during periods of ice ages.

○The glacial system is governed by precipitation and temperature in such a way that glaciers cannot form in temperate latitudes.

○When glacial ice reaches a depth of 30 meters, the weight of the ice causes ice crystals at the bottom to flow, and the resulting movement of the glacier carves the landscape.

○If global warming melted the world's glaciers, sea level would rise about 60 meters worldwide.

○Glaciers have had little effect on Earth's surface because only 2 percent of Earth's water is currently contained in glaciers, and there are fewer glaciers now than at most times in the past.

参考答案：

1. ○2

2. ○1

3. ○4

4. ○3

5. ○4

6. ○2

7. ○4

8.○2

9. ○3

10. ○1

11. ○2

12. ○1

13. ○3

14. ○1, 2, 4

参考译文

冰川的形成

冰川是一种缓慢移动的巨大的冰块，这种冰块是由于每年降雪多于融化而积累起来的。那些如六角晶体的降雪一旦飘落在地表，雪花就迅速压缩成大量的小而圆的颗粒。由于压缩与融化，这些颗粒周围空气空间也随之减少。随着进一步的融化，再结冰，以及承受位于上方的新的降雪的重量，这些积雪达到了一种介于冰片与冰块的中间阶段，该阶段可使颗粒物再次形成晶状体，这个阶段被称作积雪过程。随着不断增加的时间、压力和那些位于上方的融雪重新结冰后，那些较小的积雪颗粒开始变大并与透明的蓝色的冰层相连接。当这些冰块足够厚的时候，往往是超过 30 米，积雪的重量就会使这些冰晶朝着底部变得具有可塑性，并且会从有积雪的地方流入或者流出。

冰川是全球水循环的一部分并且冰川是一个开放的系统，降雪作为这个系统的输入物，融化作为主要的输出物。冰川系统主要由两个基本的气候变量所控制：降雨和温度。为了保持或者增加一个冰川的体积，它就必须拥有足够的降雪量，这些降雪量需要能够抵消或者超过每一年因为融雪、蒸发或者以海洋和湖泊中的冰山形式的裂冰的数量。如果夏季温度过高，所有的上一季的降雪就都会融化。对于冰川的形成，剩余的降雪就非常重要。有剩余的积雪就能够积累，并且由于多年的积雪形成的压力使得雪被埋在一个相当深的冰川里，这个深度可以使冰块流动。冰川有时会被按照温度分为快速流动冰川和慢速流动极地冰川。

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是仅次于海洋的第二大水源。地球上有大约百分之二的水源目前处于冰冻状态。但是，百分之二有可能是一个欺骗性的数据，因为全球有超过百分之八十的淡水以冰块的形态存在于冰川中，其中绝大多数的在大西洋。如果我们估算理论上全球冰川融化后所释放的水量，那么冰块的总量会是一个让人叹为观止的数量。海平面将会上升差不多 60 米。这会显著的改变星球的地理属性。相反的，如果另一个冰川时代来临，海平面会急速的下降。在最近的一个冰河时代，海平面下降了差不多 120 米。

当在高山或者极地地区降雪时，这些降雪会形成冰川系统的一部分。不像是降雨，非常快的返回至海洋或者大气中，降雪要成为冰川的一部分需要一个非常缓慢的循环系统。在这里，水会以冰的形态存在几百上千年，直到作为融水释放进入流水系统。但是，同时冰并不是静止的。冰川在巨大的能量伴随下在陆地上缓慢的移动，甚至切碎最坚硬的岩石，从而在吞没、推动、拉拽直到最后在离原址遥远的地方沉淀下这些岩石的残余物，在这个过程中它重新塑造了地形地貌。所以，冰川创造出了非常多的地形，这些地形保持不变直到有冰层覆盖在其表面。

纵观地球的大部分历史，冰川并没有存在，直到最近才有百分之十的冰川覆盖在地表。目前，在大西洋、格陵兰岛、以及除了澳大利亚的高纬度地区才能找到冰川。在不久的过去，24 万年至 1 万年前，有差不多三分之一的地表被上千米厚的冰层定期的覆盖。在更遥远的过去，其

他冰川时代也存在过。

附录：

这个文档做出的一些大改动：

6.0 版本更新内容

加入了TPO14 的 3 篇文章和TPO15 的 3 篇文章

5.8 版本更新内容

加入了本文档解析的一个宣传，希望大家能更好的准备托福阅读。

5.4 版本更新内容

修正了许多错误，增加了感谢名单，若曾经给这个文档提供过帮助而我没有加上名字的同学，请发邮件告诉我

5.3 版本更新内容

根据新版OG的内容更改了APPLIED ARTS AND FINE ARTS 的文章内容小结题和答案

更新了OG第三版的 3 篇阅读文章以及TPO10 TPO11 TPO12 TPO13 的文章

调整排版，方便大家打印

5.0 版本更新内容

更新了TPO7 TPO8 TPO9 的 9 篇阅读文章

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4.1 版本更新内容

我们甚至更改了OG之中的几处官方错误：

① OG 的 42 页，电子版的 48 页。

6. The word **in exposed** the passage .....

应该改成 The word **exposed in** the passage.....

② OG 的 85 页，电子版的 91 页

12. Directions: ..... characteristics of the 1815-**1860** period

应该改成 ..... characteristics of the 1815-**1850** period

③ OG 练习四 Aggression 的第一题是没有正确答案的，详细的解析以及题目的改正方法我也已经写在答案处

最后，感谢以下同学的帮忙与协助，他们也是制作成员中不可缺少的一部分：

○郑可馨 ○陆昱帆 ○李晓彤 ○胡欣凯 ○赵曦 ○Lu Tim ○xiangl ○luo ○蒋瑀 ○刘宇哲 ○王焘 ○Jean Zhang ○楼一珩 ○李怡 ○包子 ○刘胜源

如果我没做出记录的同学，麻烦发邮件到 data@liuwenyong.com 告诉我，我会在感谢名单里补上的。希望大家在托福阅读上有个很大的提高～

招聘启事

最近事情实在太多了,而又很多给我的学生们的资料却没有时间去编辑完成,为了尽快的完成这些应该编辑的资料,写了这个招募的启示:

1.找人帮忙,自然助手的**男女不限**;

2.自己是英语老师,自然助手的英语水平不限;

3.找人帮忙,自然可以提供帮忙的程度不限;1 个星期帮我一个小时也好))

干啥:

1.比如翻译已经有的托福阅读文章 (方便同学理解);

2.编辑我已经写好答案的题目的格式 (方便同学来看);

3.做一些电子版的笔记 (方便同学日后复习等等);

4.等等

5.绝大部分的工作都只需要通过网络进行 (不必身处北京)

回报:

0.没有现金回报

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1.针对你个人的**SAT | GRE | TOEFL的第一手指导** (一定提供)

2.吃吃喝喝 (如果你愿意的话)

3.称兄道弟 (如果最终投缘的话)

4.借书 (如果你喜欢看书的话)

要是你能够有兴趣的话,给我邮件吧：)

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