托福阅读词汇题

我们的大脑会在遇到特定的情况时，非常自然的去遵循某种模式，比如说，打喷嚏的时候，人们会自然的说：“有人想你了。”当打碎玻璃杯子的时候，人们会安慰：“碎碎平安。”这些不断重复的事件积累起来，被人们牢记于心，而且在又一次出现的时候，被人们再次遵从这些现象。

对于记忆词汇的人们来说也存在同样的过程。我们抱着一本单词书和一本鸡血书（或是视频、男/女神照片……），萦绕着信誓旦旦奋斗的情绪，恨不得早些搞定托福来弥补曾今脑子进过的水和回馈自己流过的汗水，因为重复积累记忆是最有效的背诵方式，不断的重复背诵各种词汇书就成为了鸡血生活的一部分。在鸡血了一段时间后，发现自己能够将词汇书中的词汇记下来的数量少之又少，久而久之，干脆养成了看那些已经明白了的单词，而忽略那些怎么也记不下来的单词，这样的学习效果实在是惨不忍睹。

有同学说，背单词就是重复嘛，我重复了许多遍就记下来了；有同学说，背单词就是重复嘛，但我重复了许多遍还是记不下来。重复的确是能够塑造记忆的方式，而对于记不下来的同学来说，要清楚你所重复的内容是否为有意义的信息。就像你只重复记忆那些已经背好的单词，没有背过的单词自然就不会和你产生缘分。每天试着多看一些你不认识的单词吧，就像读了《葵花宝典》，不去挥刀自宫还是练不成。

**背单词有两个方向：一个是不断去重复记忆新的单词，另一个是不断实践使用已经记下来的单词。**对于后者来说，《托福阅读词汇题》这个文档存在的意义就是利用托福真题中的词汇题来让你实践。这里收录了目前所能拿到的托福真题文章中所有的词汇题，每道题有一个被考察的词汇以及四个可供选择的词汇，并且还附上了被考察的词汇在原文当中的段落，便于理解这个词汇在原文当中的意思。

如果你是正打算学习托福，正等着托福培训班开课，却还没有实际下手的同学，请把这个文档中所有的题目做完吧。

如果你的托福恰好败在了词汇上，请把这个文档中所有的题目做完吧。

如果你在托福/SAT/GRE/GMAT的作文上遇到了词穷的困境，请把这个文档中所有的题目做完吧。

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**OG**

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. 【OG- The Origins of Cetaceans】

3. The word “precious” in the passage is closest in meaning to (3)

○exact

○scarce

○valuable

○initial

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. 【OG- The Origins of Cetaceans】

6. The word “exposed” in the passage is closest in meaning to (2)

○explained

○visible

○identified

○located

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. 【OG- The Origins of Cetaceans】

11. The word “propulsion” in the passage is closest in meaning to (4)

○staying afloat

○changing direction

○decreasing weight

○moving forward

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 desert-like 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. 【OG- Desert Formation】

1. The word “threatened” in the passage is closest in meaning to (2)

○restricted

○endangered

○prevented

○rejected

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. 【OG- Desert Formation】

3. The word “delicate” in the passage is closest in meaning to (1)

○fragile

○predictable

○complex

○valuable

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. 【OG- Desert Formation】

5. The word “progressively” in the passage is closest in meaning to (4)

○openly

○impressively

○objectively

○increasingly

7. The phrase “devoid of” in the passage is closest in meaning to (4)

○consisting of

○hidden by

○except for

○lacking in

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. 【OG- Early Cinema】

4. The word “readily” in the passage is closest in meaning to (2)

○frequently

○easily

○intelligently

○obviously

5. The word “assistance” in the passage is closest in meaning to (3)

○criticism

○leadership

○help

○approval

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. 【OG- Early Cinema】

11. The word “expanded” in the passage is closest in meaning to (1)

○was enlarged

○was improved

○was varied

○was rejected

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. 【OG- Aggression】

3. The word “inevitable” in the passage is closest in meaning to（1）

○unavoidable

○regrettable

○controllable

○unsuitable

4. The word “gratify” in the passage is closest in meaning to （3）

○identify

○modify

○satisfy

○simplify

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. 【OG- Aggression】

10. The word “distort” in the passage is closest in meaning to （2）

○mistrust

○misinterpret

○criticize

○resent

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, 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. 【OG- Artisans and Industrialization】

3. The word “disrupted” in the passage is closest in meaning to (4)

○prolonged

○established

○followed

○upset

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 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. 【OG- Artisans and Industrialization】

7. The word “spearheaded” in the passage is closest in meaning to (1)

○led

○accepted

○changed

○resisted

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. 【OG- Swimming Machines】

1. The word “enhance” in the passage is closest in meaning to (2)

○use

○improve

○counteract

○balance

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. 【OG- Swimming Machines】

4. The word “sophisticated” in the passage is closest in meaning to (1)

○complex

○amazing

○creative

○practical

Paragraph 7: 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. 【OG- Swimming Machines】

8. The word “channel” in the passage is closest in meaning to (3)

○reduce

○remove

○direct

○provide

Paragraph 1: 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. 【OG- Nineteenth-Century Politics in the United States】

1. The word “immeasurably” in the passage is closest in meaning to (2)

○frequently

○greatly

○rapidly

○reportedly

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 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. 【OG- Nineteenth-Century Politics in the United States】

6. The word “inclination” in the passage is closest in meaning to (2)

○argument

○tendency

○example

○warning

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. 【OG- Nineteenth-Century Politics in the United States】

8. The word “concept” in the passage is closest in meaning to (4)

○power

○reality

○difficulty

○idea

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. 【OG- The Expression of Emotions】

1. The word “despondent” in the passage is closest in meaning to （2）

○curious

○unhappy

○thoughtful

○uncertain

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. 【OG- The Expression of Emotions】

3. The word “concur” in the passage is closest in meaning to （2）

○estimate

○agree

○expect

○understand

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. 【OG- The Expression of Emotions】

9. The word rate in the passage is closest in meaning to (1)

○judge

○reject

○draw

○want

Paragraph 6: 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. 【OG- The Expression of Emotions】

10. The word “relevant” in the passage is closest in meaning to (4)

○contradictory

○confusing

○dependent

○applicable

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. 【OG- Geology and Landscape】

2. The word “relatively” in the passage is closest in meaning to （2）

○ 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. 【OG- Geology and Landscape】

4. The word “relics” in the passage is closest in meaning to（3）

○resemblances

○regions

○remains

○restorations

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. 【OG- Geology and Landscape】

7. The word “seeps” in the passage is closest in meaning to (2)

○dries gradually

○flows slowly

○freezes quickly

○warms slightly

**TPO-1**

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. 【TPO1- Groundwater】

3. The word “out of sight” in the passage is closest in meaning to （2）

○far away

○hidden

○partly visible

○discovered

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. 【TPO1- Groundwater】

7. The word “overlie” in the passage is closest in meaning to (1)

○ 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. 【TPO1- Groundwater】

9. The word “plugged” in the passage is closet in meaning to (3)

○washed

○dragged

○filled up

○soaked through

Paragraph 1: 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. 【TPO1- The Origins of Theater】

1. The word “championed” in the passage is closest in meaning to （4）

○changed

○debated

○created

○supported

2. The word “attributes” in the passage is closest in meaning to (1)

○ascribes

○leaves

○limits

○contrasts

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 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. 【TPO1- The Origins of Theater】

6. The word “autonomous” in the passage is closest in meaning to (3)

○artistic

○important

○independent

○established

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. 【TPO1- Timberline Vegetation on Mountains】

1. The word “dramatic” in the passage is closest in meaning to (4)

○gradual

○complex

○visible

○striking

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. 【TPO1- Timberline Vegetation on Mountains】

5. The word “attain” in the passage is closest in meaning to(3)

○require

○resist

○achieve

○endure

7. The word “prone” in the passage is closest in meaning to (2)

○adapted

○likely

○difficult

○resistant

**TPO-3**

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. 【TPO3- Architecture】

2.The word “feasible” in the passage is closest in meaning to （3）

○in existence

○without question

○achievable

○most likely

3. The word “enhance” in the passage is closest in meaning to （2）

○protect

○improve

○organize

○match

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. 【TPO3- Architecture】

5. The word “devised” in the passage is closest in meaning to (2)

○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 years ago. 【TPO3- Architecture】

6. The word “integral” is closest in meaning to (1)

○essential

○variable

○practical

○independent

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. 【TPO3- Architecture】

10. The word “arduous” in the passage is closest in meaning to (1)

○difficult

○necessary

○skilled

○shared

Paragraph 3: The first wells were drilled into the Ogallala during the drought years of the early 1930s. The ensuing rapid expansion of irrigation agriculture, especially from the 1950s 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. 【TPO3- Depletion of the Ogallala Aquifer】

4. The word “ensuing” in the passage is closest in meaning to （4）

○continuing

○surprising

○initial

○subsequent

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 1930s, 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. 【TPO3- Depletion of the Ogallala Aquifer】

6. The word “unprecedented” in the passage is closest in meaning to（3）

○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 （4）

○clearly

○perhaps

○frequently

○almost

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. Others, 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. 【TPO3- Depletion of the Ogallala Aquifer】

10. The word “inevitable” in the passage is closest in meaning to （3）

○unfortunate

○predictable

○unavoidable

○final

Paragraph 1: 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. 【TPO3- The Long-Term Stability of Ecosystems】

1. The word “particular” in the passage is closest in meaning to (3)

○natural

○final

○specific

○complex

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. 【TPO3- The Long-Term Stability of Ecosystems】

8. The word “guarantee” in the passage is closest in meaning to(2)

○increase

○ensure

○favor

○complicate

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. 【TPO3- The Long-Term Stability of Ecosystems】

10. The word “pales” in the passage is closest in meaning to (3)

○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. 【TPO3- The Long-Term Stability of Ecosystems】

12．The word “adjacent” in the passage is closest in meaning to (4)

○foreign

○stable

○fluid

○neighboring

**Online Test**

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 reproduction, for this is the surest way to extinction. 【Online Test- Opportunists and Competitors】

1. The word “squander” in the passage is closest in meaning to (4)

○ extend

○ transform

○ activate

○ waste

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.【Online Test- Opportunists and Competitors】

5. The word “dispersal” in the passage is closest in meaning to (3)

○development

○growth

○distribution

○protection

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 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. 【Online Test- Opportunists and Competitors】

7. The word “massive” in the passage is closest in meaning to (1)

○ huge

○ ancient

○ common

○ successful

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. 【Online Test- Lascaux Cave Paintings】

2. The word “Methods” in the passage is closest in meaning to（1）

○Ways

○Shades

○Stages

○Rules

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. 【Online Test- Lascaux Cave Paintings】

7. The word “accompanied” in the passage is closest in meaning to（3）

○represented

○developed into

○were associated with

○came after

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. 【Online Test- Electricity from Wind】

2. The word “emit” in the passage is closest in meaning to（3）

○use

○require

○release

○destroy

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. 【Online Test- Electricity from Wind】

10. The phrase “amount to” in the passage is closest in meaning to （4）

○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. 【Online Test- Electricity from Wind】

11. The word “project” in the passage is closest in meaning to （1）

○estimate

○respond

○argue

○plan

**TPO-4**

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, 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. 【TPO4- Deer Populations of the Puget Sound】

3. The word "inhibits" in the passage is closest in meaning to （3）

○ 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 arrived at the mouth of the Columbia River on November 14, 1805, in nearly starved circumstances. They 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." 【TPO4- Deer Populations of the Puget Sound】

4. The phrase "in the same breath" in the passage is closest in meaning to （4）

○ impatiently

○ humorously

○ continuously

○ immediately

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 fate 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. 【TPO4- Deer Populations of the Puget Sound】

10．The word “rebound” in the passage is closest in meaning to （4）

○ decline

○ recovery

○ exchange

○ movement

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. 【TPO4- Cave Art in Europe】

1．The word “marked” in the passage is closest in meaning to （1）

○considerable

○surprising

○limited

○adequate

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 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. 【TPO4- Cave Art in Europe】

5．The word “trappings” in the passage is closest in meaning to （4）

○conditions

○problems

○influences

○decorations

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. 【TPO4- Petroleum Resources】

1．The word “accumulate” in the passage is closest in meaning to （2）

○grow up

○build up

○spread out

○break apart

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. 【TPO4- Petroleum Resources】

5．The word “adjacent” in the passage is closest in meaning to （1）

○nearby

○existing

○special

○deep

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.

9．The word “sloping” in the passage is closest in meaning to （2）

○shifting

○inclining

○forming

○rolling

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 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. 【TPO4- Petroleum Resources】

11．The word “foul” in the passage is closest in meaning to （3）

○reach

○flood

○pollute

○alter

**Official Model Exam**

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. 【Official Model Exam- Meteorite Impact and Dinosaur Extinction】

1. The word “pose” in the passage is closest in the meaning to （4）

○claim

○model

○assume

○present

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. 【Official Model Exam- Meteorite Impact and Dinosaur Extinction】

5. The word “excavating” in the passage is closest in the meaning to （1）

○ digging out

○ extending

○ destroying

○ covering up

6. The word “consumed” in the passage is closest in the meaning to （3）

○ changed

○ exposed

○ destroyed

○ covered

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 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. 【Official Model Exam- Meteorite Impact and Dinosaur Extinction】

8. The phrase “tentatively identified” in the passage is closest in the meaning to （2）

○ 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. 【Official Model Exam- Meteorite Impact and Dinosaur Extinction】

9. The word “perspective” in the passage is closest in the meaning to （2）

○ sense of values

○ point of view

○ calculation

○ complication

**TPO-5**

Paragraph 2: Mineral deficiencies can often be detected by specific symptoms such as chlorosis (loss of chlorophyll resulting in yellow or white leaf tissue), 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. 【TPO5- Minerals and Plants】

2. The word “exhibit” in the passage is closest in meaning to （2）

○ fight off

○ show

○ cause

○ spread

Paragraph 3: 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. Aeroponics, a technique in which plants are suspended and the roots misted with a nutrient solution, is another method for growing plants without soil. 【TPO5- Minerals and Plants】

5. The word “facilitates” in the passage is closest in meaning to（3）

○ slows down

○ affects

○ makes easier

○ focuses on

7. The word “suspended” in the passage is closest in meaning to （4）

○ grown

○ protected

○ spread out

○ hung

Paragraph 5: Scientists have known for some time that certain plants, called hyperaccumulators, can concentrate minerals at levels a hundredfold or greater than normal. A survey of known hyperaccumulators identified that 75 percent of them amassed nickel, cobalt, copper, zinc, manganese, lead, and cadmium are other minerals of choice. Hyperaccumulators 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 hyperaccumulators. 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. 【TPO5- Minerals and Plants】

9. The word “afford” in the passage is closest in meaning to （1）

○ offer

○ prevent

○ increase

○ remove

Paragraph 2: 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. 【TPO5- The Origin of the Pacific Island People】

3. The word “overwhelming” in the passage is closest in meaning to （1）

○ powerful

○ favorable

○ current

○ reasonable

Paragraph 3: 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. 【TPO5- The Origin of the Pacific Island People】

6. The word “implements” in the passage is closest in meaning to （2）

○ skills

○ tools

○ opportunities

○ practices

Paragraph 4: 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. 【TPO5- The Origin of the Pacific Island People】

10. The word “undisputed” in the passage is closest in meaning to （3）

○ mysterious

○ unexpected

○ acknowledged

○ significant

Paragraph 1: 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.” 【TPO5- The Cambrian Explosion】

1. The word “significant” in the passage is closest in meaning to (2)

○ numerous

○ important

○ unexplained

○ sudden

2. The word “relatively” in the passage is closest in meaning to (3)

○ surprisingly

○ collectively

○ comparatively

○ characteristically

3. The word “diversification” in the passage is closest in meaning to（1）

○ emergence of many varieties

○ steady decline in number

○ gradual increase in body size

○ sudden disappearance

Paragraph 3: 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. 【TPO5- The Cambrian Explosion】

7. The word “promote” in the passage is closest in meaning to（3）

○ complicate

○ prevent

○ encourage

○ affect

**TPO-6**

Paragraph 2: The source had long been known but not exploited. Early in the eighteenth 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. 【TPO6-Powering the Industrial Revolution】

3. The word “exploited” in the passage is closest in meaning to (1)

○utilized

○recognized

○examined

○fully understood

4. The word “vastly” in the passage is closet in meaning to （3）

○quickly

○ultimately

○greatly

○initially

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 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. 【TPO6-Powering the Industrial Revolution】

8. The phrase “grew accustomed to” in the passage is closest in meaning to(3)

○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 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. 【TPO6-Powering the Industrial Revolution】

9. The word “retained” in the passage is closest in meaning to (4)

○gained

○established

○profited from

○maintained

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. 【TPO6- William Smith】

1. The word “rudimentary” in the passage is closest in meaning to (3)

○thorough

○strict

○basic

○occasional

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 10,000 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. 【TPO6- William Smith】

5. The word “meticulously” in the passage is closest in meaning to (1)

○carefully

○quickly

○frequently

○obviously

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. 【TPO6- William Smith】

9. The word “endured” in the passage is closest in meaning to (4)

○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. 【TPO6- William Smith】

10. The word “virtually” in the passage is closest in meaning to (4)

○possibly

○absolutely

○surprisingly

○nearly

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. 【TPO6- Infantile Amnesia】

2. The word “plausible” in the passage is closest in meaning to （2）

○flexible

○believable

○debatable

○predictable

3. The word “phenomenon” in the passage is closest in meaning to(3)

○exception

○ repetition

○occurrence

○idea

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. 【TPO6- Infantile Amnesia】

7. The word “critically” in the passage is closest in meaning to （1）

○ fundamentally

○ partially

○ consistently

○ subsequently

8. The word “perspective” in the passage is closest in meaning to （4）

○ system

○ theory

○ source

○ viewpoint

**TPO-7**

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, bringing new species with them. Why did the near extinction and migrations occur? 【TPO7- The Geologic History of the Mediterranean】

1．The word “objective” in the passage is closest in meaning to (3)

○achievement

○requirement

○purpose

○feature

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 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. 【TPO7- The Geologic History of the Mediterranean】

8. The word “scores” in the passage is closest in meaning to (2)

○members

○large numbers

○populations

○different type

11. The word “Turbulent” in the passage is closest in meaning to (3)

○Fresh

○Deep

○Violent

○Temperate

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. 【TPO7- Ancient Rome and Greece】

3. The phrase “obsession with” in the passage is closest in meaning to （2）

○ thinking about

○ fixation on

○ interest in

○ attitude toward

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. 【TPO7- Ancient Rome and Greece】

6. The word “fostered” in the passage is closest in meaning to (4)

○ accepted

○ combined

○ introduced

○ encouraged

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. 【TPO7- Ancient Rome and Greece】

11. The word “spheres” in the passage is closest in meaning to （2）

○ abilities

○ areas

○ combinations

○ models

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. 【TPO7- Agriculture, Iron, and the Bantu Peoples】

1. The word “diffused” in the passage is closest in meaning to （3）

○ emerged

○ was understood

○ spread

○ developed

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 weapons had an important place in society, often with special religious powers 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. 【TPO7- Agriculture, Iron, and the Bantu Peoples】

7. The word “profound” in the passage is closest in meaning to（2）

○ fascinating

○ far-reaching

○ necessary

○ temporary

8. The word “ritual” in the passage is closest in meaning to （3）

○ military

○ physical

○ ceremonial

○ permanent

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, proto-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. 【TPO7- Agriculture, Iron, and the Bantu Peoples】

11. The word “fleeing” in the passage is closest in meaning to （3）

○ afraid of

○ displaced by

○ running away from

○ responding to

**TPO-8**

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 this great metropolis. Moreover, the city had economic and perhaps religious contacts with most parts of Mesoamerica (modern Central America and Mexico). 【TPO8- The Rise of Teotihuacán】

1. The word “massive” in the passage is closest in meaning to (3)

○ ancient

○ carefully

○ very large

○ carefully protected

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 Teotihuacán was the center that did arise as the predominant force in the area by the first century A.D. 【TPO8- The Rise of Teotihuacán】

8. The word “predominant” in the passage is closest in meaning to （3）

○ most aggressive

○ most productive

○ principal

○ earliest

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. 【TPO8- Extinction of the Dinosaurs】

4. The word “cope” in the passage is closest in meaning to （1）

○ adapt

○ move

○ continue

○ compete

6.The word “fluctuations” in the passage is closest in meaning to (4)

○ extremes

○ retreats

○ periods

○ variations

Paragraph 5: Ir 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. Ir 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 Ir 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 Ir seems to require a special explanation. 【TPO8- Extinction of the Dinosaurs】

9. The word “bombard” in the passage is closest in meaning to （2）

○ approach

○ strike

○ pass

○ circle

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. 【TPO8- Extinction of the Dinosaurs】

11. The word “disruption” in the passage is closest in meaning to （2）

○ exhaustion

○ disturbance

○ modification

○ disappearance

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 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. 【TPO8- Running Water on Mars?】

1. The word “merge” in the passage is closest in meaning to （4）

○ expand

○ separate

○ straighten out

○ combine

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. 【TPO8- Running Water on Mars?】

3. The word “relics” in the passage is closest in meaning to （1）

○ remains

○ sites

○ requirements

○ sources

4. The word “miniature” in the passage is closest in meaning to （2）

○ temporary

○ small

○ multiple

○ familiar

Paragraph 5: 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. 【TPO8- Running Water on Mars?】

11. The word “hints” in the passage is closest in meaning to (1)

○ clues

○ features

○ arguments

○ effects

**TPO-9**

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 this 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 this midcontinental corridor between two massive ice sheets–the Laurentide to the east and the Cordilleran 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. 【TPO9- Colonizing the Americas via the Northwest Coast】

2. The word “persuasively” in the passage is closest in meaning to （3）

○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 Americas 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 Americas 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 extends 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. 【TPO9- Colonizing the Americas via the Northwest Coast】

4. The phrase “prior to” is closest in meaning to （1）

○ before

○ immediately after

○ during

○ in spite of

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. 【TPO9- Colonizing the Americas via the Northwest Coast】

8. The word “Vast” in the passage is closest in meaning to （4）

○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 other 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 between13,000 and 14,000 years ago. 【TPO9- Colonizing the Americas via the Northwest Coast】

10. The word “inhospitable” in the passage is closest in meaning to （2）

○ not familiar

○ not suitable

○ not dangerous

○ not reachable

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. 【TPO9- Colonizing the Americas via the Northwest Coast】

12. The word “impetus” in the passage is closest in meaning to （4）

○ chance

○ protection

○ possibility

○ incentive

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. 【TPO9- Reflection in Teaching】

1. The word “justified” in the passage is closest in meaning to （1）

○supported

○shaped

○stimulated

○suggested

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. 【TPO9- Reflection in Teaching】

6. The word “objective” in the passage is closest in meaning to （1）

○ unbiased

○ positive

○ systematic

○ thorough

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.” 【TPO9- Reflection in Teaching】

9. The word “compelling” in the passage is closest in meaning to （2）

○ commonly held

○ persuasive

○ original

○ practical

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 thing 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. 【TPO9- The Arrival of Plant Life in Hawaii】

1. The phrase “at random” in the passage is closest in meaning to （4）

○finally

○over a long period of time

○successfully

○without a definite pattern

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 spore 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. 【TPO9- The Arrival of Plant Life in Hawaii】

4. The word “abundantly” in the passage is closest in meaning to （2）

○ occasionally

○ plentifully

○ usefully

○ fortunately

5. The word “propagate” in the passage is closest in meaning to （1）

○ multiply

○ emerge

○ live

○ evolve

Paragraph 4: Many millions of years after ferns evolved (but long before the Hawaiian Islands 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 angiosperms the seeds are equipped with gossamer wings, like the dandelion and milkweed seeds. These new characteristics offered better ways for the seed to move to new habitats. They could travel through the air, float in water, and lie dormant for many months. 【TPO9- The Arrival of Plant Life in Hawaii】

10. The word “dormant” in the passage is closest in meaning to （2）

○hidden

○inactive

○underground

○preserved

**OG Test 2**

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 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. 【OG Test 2- Feeding Habits of East African Herbivores】

1. The word illusory in the passage is closest in meaning to (3)

○ definite

○ illuminating

○ misleading

○ exceptional

2. The word sparsely in the passage is closest in meaning to (2)

○ widely

○ thinly

○ clearly

○ freshly

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. 【OG Test 2- Feeding Habits of East African Herbivores】

4. The word associated in the passage is closest in meaning to (4)

○ obvious

○ significant

○ expected

○ connected

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. 【OG Test 2- Feeding Habits of East African Herbivores】

9. The phrase provided that in the passage is closest in meaning to (1)

○ 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 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. 【OG Test 2- Feeding Habits of East African Herbivores】

10. The word fastidious in the passage is closest in meaning to(4)

○ rapid

○ determined

○ flexible

○ demanding

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. 【OG Test 2- Loie Fuller】

3. The word “prestigious” in the passage is closest in meaning to （1）

○ highly regarded

○ financially rewarding

○ demanding

○ serious

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 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. 【OG Test 2- Loie Fuller】

5. The word “engaged” in the passage is closest in meaning to（3）

○ noticed

○ praised

○ hired

○ attracted

6. The word “synthesize” in the passage is closest in meaning to （4）

○ improve

○ define

○ simplify

○ integrate

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. 【OG Test 2- Loie Fuller】

10. The word “agitated” in the passage is closest in meaning to (2)

○ emerged from beneath

○ created movement in

○ arranged themselves in

○ pretended to be

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. 【OG Test 2- Green Icebergs】

4. The word “penetrate” in the passage is closest in meaning to （2）

○ collect

○ pierce

○ melt

○ endure

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. 【OG Test 2- Green Icebergs】

8. The word “accumulated” in the passage is closest in meaning to（1）

○collected

○frozen

○released

○ covered

9. The word “excluded” in the passage is closest in meaning to (1)

○ kept out

○ compressed

○ damaged

○ gathered together

10. The word “accrete” in the passage is closest in meaning to (4)

○advance

○transfer

○flatten out

○come together

**TPO-10**

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 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. 【TPO10- Chinese Pottery】

1.The word “status” in the passage is closest in meaning to (2)

○ origin

○ importance

○ quality

○ design

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 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. 【TPO10- Chinese Pottery】

3. The word “evolve” in the passage is closest in meaning to(3)

○ divided

○ extended

○ developed

○ vanished

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 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. 【TPO10- Chinese Pottery】

6. The word “instigate” in the passage is closest in meaning to (4)

○ improved

○ investigated

○ narrowed

○ caused

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. 【TPO10- Chinese Pottery】

8. The word “whereas” in the passage is closest in meaning to (1)

○ while

○ previously

○ surprisingly

○ because

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). 【TPO10- Variations in the Climate】

5. The word “striking” in the passage is closest in meaning to (1)

○ noticeable

○ confusing

○ true

○ unlikely

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. 【TPO10- Variations in the Climate】

7. The word “erratic” in the passage is closest in meaning to （3）

○ dramatic

○ important

○ unpredictable

○ common

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 centuries, but that they cannot be invoked to explain the rapid warming in recent decades. 【TPO10- Variations in the Climate】

10. The word “deliberations” in the passage is closest in meaning to (2)

○ records

○ discussions

○ results

○ variations

11. The word “invoked” in the passage is closest in meaning to (2)

○ demonstrated

○ called upon

○ supported

○ expected

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. 【TPO10- Seventeenth-Century European Economic Growth】

2. The word key in the passage is closest in meaning to (3)

○ historical

○ many

○ important

○ hidden

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. 【TPO10- Seventeenth-Century European Economic Growth】

6. The word “meager” in the passage is closest in meaning to (2)

○ very necessary

○ very low

○ traditional

○ primary

**TPO-11**

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. 【TPO11- Ancient Egyptian Sculpture】

1. The word “vital” in the passage is closest in meaning to （2）

○ attractive

○ essential

○ usual

○ practical

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. 【TPO11- Ancient Egyptian Sculpture】

5. The word “context” in the passage is closest in meaning to （3）

○ connection

○ influence

○ environment

○ requirement

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. 【TPO11- Ancient Egyptian Sculpture】

9. The word “core” in the passage is closest in meaning to （3）

○ material

○ layer

○ center

○ frame

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. 【TPO11- Ancient Egyptian Sculpture】

11. The word depicts in the passage is closest in meaning to （4）

○ imagines

○ classifies

○ elevates

○ portrays

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. 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. 【TPO11- Orientation and Navigation】

2. The word “perplexed” in the passage is closest in meaning to (3)

○ 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 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. 【TPO11- Orientation and Navigation】

4. The word “preposterous” in the passage is closest in meaning to （1）

○ unbelievable

○ inadequate

○ limited

○ creative

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. 【TPO11- Orientation and Navigation】

12. The word “accumulating” in the passage is closest in meaning to （2）

○ new

○ increasing

○ convincing

○ extensive

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. 【TPO11- Begging by Nestlings】

1. The phrase “impose on” in the passage is closest in meaning to (3)

○ increase for

○ remove from

○ place on

○ distribute to

Paragraph 2: 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. 【TPO11- Begging by Nestlings】

3. The word “artificial” in the passage is closest in meaning to (2)

○ attractive

○ not real

○ short-term

○ well designed

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. 【TPO11- Begging by Nestlings】

6. The word “prediction” in the passage is closest in meaning to (4)

○ surprise

○ discovery

○ explanation

○ expectation

7. The word “pinpoint” in the passage is closest in meaning to （2）

○ 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. 【TPO11- Begging by Nestlings】

8. The word “derive” in the passage is closest in meaning to (2)

○ require

○ gain

○ use

○ produce

**TPO-12**

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. 【TPO12- Which Hand Did They Use?】

1. The phrase “assisted in” in the passage is closest in meaning to （3）

○ initiated

○ dominated

○ helped with

○ setup

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. 【TPO12- Which Hand Did They Use?】

3. The phrase “depicted” in the passage is closest in meaning to （3）

○ identified

○ revealed

○ pictured

○ imagined

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 Fora, 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. 【TPO12- Which Hand Did They Use?】

10. The word “criteria” in the passage is closest in meaning to （1）

○ standards

○ findings

○ ideas

○ techniques

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. 【TPO12- Transition to Sound in Film?】

1. The word “regarded” in the passage is closest in meaning to （2）

○analyzed

○considered

○altered

○criticized

Paragraph 2: 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. 【TPO12- Transition to Sound in Film?】

3. The word “paradoxes” in the passage is closest in meaning to （4）

○difficulties

○accomplishments

○parallels

○contradictions

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. 【TPO12- Transition to Sound in Film?】

6. The word “overshadowed” in the passage is closest in meaning to （1）

○distracted from

○explained

○conducted

○coordinated with

Paragraph 4: Though it may be difficult to imagine from a later perspective, a strain of critical opinion in the 1920s 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 1920s 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. 【TPO12- Transition to Sound in Film?】

9. The word “neglected” in the passage is closest in meaning to （1）

○failed

○needed

○started

○expected

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 sustaining life in some of the driest parts of the world. For centuries, the annual floods of the Nile, Tigris, and Euphrates, for example, have 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. 【TPO12- Water in the Desert】

2. The word “drastically” in the passage is closest in meaning to (4)

○obviously

○unfortunately

○rapidly

○severely

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 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. 【TPO12- Water in the Desert】

5. The word “dwellers” in the passage is closest in meaning to (4)

○settlements

○farmers

○tribes

○inhabitants

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 limestones when joints and cracks have been enlarged to form cavities. Most limestone and sandstone aquifers are deep and extensive but may contain groundwaters 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. 【TPO12- Water in the Desert】

7. The word “fractures” in the passage is closest in meaning to (2)

○streams

○cracks

○storms

○earthquakes

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 the Indus plain, the movement of saline (salty) groundwaters 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. 【TPO12- Water in the Desert】

10. The word “immobile” in the passage is closest in meaning to （3）

○enclosed

○permanent

○motionless

○intact

**TPO-13**

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. 【TPO13- Types of Social Groups】

1. The word “complex” in the passage is closest in meaning to （2）

○ delicate

○ elaborate

○ private

○ common

Paragraph 2: 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. 【TPO13- Types of Social Groups】

3. The word endowing in the passage is closest in meaning to (3)

○ leaving

○ exposing

○ providing

○ understanding

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. 【TPO13- Types of Social Groups】

7. The phrase “size up” in the passage is closest in meaning to (2)

○ enlarge

○ evaluate

○ impress

○ accept

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 our behavior that conforms to group-devised meanings. Primary groups, then, serve both as carriers of social norms and as enforcers of them. 【TPO13- Types of Social Groups】

10. The word “deviate” in the passage is closest in meaning to （4）

○ detract

○ advance

○ select

○ depart

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. 【TPO13- Biological Clocks】

1. The word “Consequently” in the passage is closest in meaning to (1)

○Therefore

○Additionally

○Nevertheless

○Moreover

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. 【TPO13- Biological Clocks】

4. The word “persistent” in the passage is closest in meaning to(3)

○adjusted

○strong

○enduring

○predicted

9. The word duration in the passage is closest in meaning to (1)

○length

○feature

○process

○repetition

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. 【TPO13- Biological Clocks】

12. The word “sustained” in the passage is closest in meaning to （2）

○ intense

○ uninterrupted

○ natural

○ periodic

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 (newborn), 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. 【TPO13- Methods of Studying Infant Perception】

2. The word uniformly in the passage is closest in meaning to （3）

○clearly

○quickly

○consistently

○occasionally

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 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. 【TPO13- Methods of Studying Infant Perception】

5. The word potent in the passage is closest in meaning to (2)

○artificial

○powerful

○common

○similar

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 nonnutritive 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 nonnutritive 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. 【TPO13- Methods of Studying Infant Perception】

8. The word quantifiable in the passage is closest in meaning to （4）

○visual

○permanent

○meaningful

○measurable

**TPO-14**

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. 【TPO14- Children and Advertising】

2. The word “verify” in the passage is closest in meaning to(1)

○establish the truth of

○approve of

○understand

○criticize

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. 【TPO14- Children and Advertising】

6. The word “adept” in the passage is closest in meaning to (2)

○responsible

○skillful

○patient

○curious

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 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. 【TPO14- Children and Advertising】

9. The word "attributes" in the passage is closest in meaning to （4）

○ evaluations

○ attitudes

○ actions

○ characteristics

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. 【TPO14- Children and Advertising】

11. The word "credible” in the passage is closest in meaning to (2)

○ helpful

○ believable

○ valuable

○ familiar

Paragraph 3: Although southern 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 modern 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. 【TPO14- Maya Water Problems】

4. The word “paradoxically” in the passage is closest in meaning to (2)

○usually

○surprisingly

○understandably

○predictably

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. 【TPO14- Maya Water Problems】

10. The word "prolonged" in the passage is closest in meaning to (3)

○unusual

○unexpected

○extended

○disastrous

11. The word "exhausted" in the passage is closest in meaning to (1)

○used up

○reduced

○wasted

○relied upon

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 forms 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. 【TPO14- Pastoralism in Ancient Inner Eurasia】

1. The word “prestige” in the passage is closest in meaning to （2）

○interest

○status

○demand

○profit

3. The word “profound” in the passage is closest in meaning to （4）

○strange

○positive

○direct

○far-reaching

Paragraph 3: 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 Eastern 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 modern 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. 【TPO14- Pastoralism in Ancient Inner Eurasia】

7. The word "striking” in the passage is closest in meaning to (2)

○reliable

○noticeable

○convincing

○violent

8. The word "exploit” in the passage is closest in meaning to (1)

○use to advantage

○depart from

○pay attention to

○travel across

**TPO-15**

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. 【TPO15- A Warm-Blooded Turtle】

1. The phrase “unique among” in the passage is closest in meaning to （2）

○natural to

○different from all other

○quite common among

○familiar to

Paragraph 2: A warm-blooded turtle may seem to be a contradiction in terms. Nonetheless, an adult leatherback can maintain a body temperature of between 25 and 26°C (77-79°F) in seawater that 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. 【TPO15- A Warm-Blooded Turtle】

3. The word “feat” in the passage is closest in meaning to （1）

○remarkable achievement

○common transformation

○daily activity

○complex solution

Paragraph 3: Leatherbacks keep their body heat in three different ways. The first, and simplest, is size. The bigger the animal is, the lower its surface-to-volume 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 gigantothermy. 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 it. Muscular activity helps, too, and an actively swimming green turtle may be 7°C (12.6°F) warmer than the waters it swims through. 【TPO15- A Warm-Blooded Turtle】

5. The word “bulk” in the passage is closest in meaning to (4)

○strength

○effort

○activity

○mass

Paragraph 5: 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. 【TPO15- A Warm-Blooded Turtle】

10. The phrase “courses through” in the passage is closest in meaning to (3)

○rises through

○heats up in

○runs through

○collects in

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 fail 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. 【TPO15- Mass Extinctions】

3. The word extended in the passage is closest in meaning to（4）

○ specific

○ unlimited

○ reasonable

○ long

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. 【TPO15- Mass Extinctions】

8. The phrase account for in the passage is closest in meaning to (3)

○describe

○challenge

○explain

○test

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. 【TPO15- Mass Extinctions】

11. The word intense in the passage is closest in meaning to （4）

○ sudden

○ unusual

○ immediate

○ extreme

Paragraph1: Glaciers are slowly moving masses of ice that have accumulated on land in areas where more snowfalls during a year than melts. Snow falls 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. 【TPO15- Glacier Formation】

1. The word “interlocked” in the passage is closest in meaning to （2）

○intermediate

○linked

○frozen

○fully developed

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 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. 【TPO15- Glacier Formation】

3. The word “match” in the passage is closest in meaning to (4)

○measure

○enlarge

○approximate

○equal

4. The word “transform” in the passage is closest in meaning to (3)

○break

○push

○change

○extend

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. 【TPO15- Glacier Formation】

7. The word “deceiving” in the passage is closest in meaning to （4）

○approximate

○exaggerated

○unusual

○misleading

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 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. 【TPO15- Glacier Formation】

10. The word “static” in the passage is closest in meaning to （1）

○unchanging

○usable

○thick

○harmless

**TPO-16**

Paragraph 2: Reliance on trade had several important consequences. Production was generally in the hands of skilled individual artisans doing piecework under the tutelage of a master who was also the shop owner. In these shops differences of rank were blurred as artisans and masters labored side by side in the same modest establishment, were usually members of the same guild and religious sect, lived in the same neighborhoods, and often had assumed (or real) kinship relationships. The worker was bound to the master by a mutual contract that either one could repudiate, and the relationship was conceptualized as one of partnership. 【TPO16- Trade and the Ancient Middle East】

2. The word “repudiate” in the passage is closest in meaning to (2)

○respect

○reject

○review

○revise

Paragraph 3: This mode of craft production favored the growth of self-governing and ideologically egalitarian craft guilds everywhere in the Middle Eastern city. These were essentially professional associations that provided for the mutual aid and protection of their members, and allowed for the maintenance of professional standards. The growth of independent guilds was furthered by the fact that surplus was not a result of domestic craft production but resulted primarily from international trading; the government left working people to govern themselves, much as shepherds of tribal confederacies were left alone by their leaders. In the multiplicity of small-scale local egalitarian or quasi-egalitarian organizations for fellowship, worship, and production that flourished in this laissez-faire environment, individuals could interact with one another within a community of harmony and ideological equality, following their own popularly elected leaders and governing themselves by shared consensus while minimizing distinctions of wealth and power. 【TPO16- Trade and the Ancient Middle East】

6. The word “consensus” in the passage is closest in meaning to （4）

○authority

○responsibility

○custom

○agreement

Paragraph 4: The mercantile economy was also characterized by a peculiar moral stance that is typical of people who live by trade—an attitude that is individualistic, calculating, risk taking, and adaptive to circumstances. As among tribes people, personal relationships and a careful weighing of character have always been crucial in a mercantile economy with little regulation, where one's word is one's bond and where informal ties of trust cement together an international trade network. Nor have merchants and artisans ever had much tolerance for aristocratic professions of moral superiority, favoring instead an egalitarian ethic of the open market, where steady hard work, the loyalty of one's fellows, and entrepreneurial skill make all the difference. And, like the pastoralists, Middle Eastern merchants and artisans unhappy with their environment could simply pack up and leave for greener pastures—an act of self-assertion wholly impossible in most other civilizations throughout history. 【TPO16- Trade and the Ancient Middle East】

9. The word “ethic” in the passage is closest in meaning to （1）

○set of moral principles

○division of labor

○economic system

○test of character

Paragraph 5: Dependence on long-distance trade also meant that the great empires of the Middle East were built both literally and figuratively on shifting sand. The central state, though often very rich and very populous, was intrinsically fragile, since the development of new international trade routes could undermine the monetary base and erode state power, as occurred when European seafarers circumvented Middle Eastern merchants after Vasco da Gama's voyage around Africa in the late fifteenth century opened up a southern route. The ecology of the region also permitted armed predators to prowl the surrounding barrens, which were almost impossible for a state to control. Peripheral peoples therefore had a great advantage in their dealings with the center, making government authority insecure and anxious. 【TPO16- Trade and the Ancient Middle East】

11. The word “intrinsically” in the passage is closest in meaning to （1）

○fundamentally

○surprisingly

○consequently

○particularly

Paragraph 1: The periodic table is a chart that reflects the periodic recurrence of chemical and physical properties of the elements when the elements are arranged in order of increasing atomic number (the number of protons in the nucleus). It is a monumental scientific achievement, and its development illustrates the essential interplay between observation, prediction, and testing required for scientific progress. In the 1800's scientists were searching for new elements. By the late 1860's more than 60 chemical elements had been identified, and much was known about their descriptive chemistry. Various proposals were put forth to arrange the elements into groups based on similarities in chemical and physical properties. The next step was to recognize a connection between group properties (physical or chemical similarities) and atomic mass (the measured mass of an individual atom of an element). When the elements known at the time were ordered by increasing atomic mass, it was found that successive elements belonged to different chemical groups and that the order of the groups in this sequence was fixed and repeated itself at regular intervals. Thus when the series of elements was written so as to begin a new horizontal row with each alkali metal, elements of the same groups were automatically assembled in vertical columns in a periodic table of the elements. This table was the forerunner of the modern table. 【TPO16- Development of the Periodic Table】

1. The phrase interplay in the passage is closest in meaning to （4）

○sequence

○interpretation

○requirement

○interaction

Paragraph 2: When the German chemist Lothar Meyer and (independently) the Russian Dmitry Mendeleyev first introduced the periodic table in 1869-70, one-third of the naturally occurring chemical elements had not yet been discovered. Yet both chemists were sufficiently farsighted to leave gaps where their analyses of periodic physical and chemical properties indicated that new elements should be located. Mendeleyev was bolder than Meyer and even assumed that if a measured atomic mass put an element in the wrong place in the table, the atomic mass was wrong. In some cases this was true. Indium, for example, had previously been assigned an atomic mass between those of arsenic and selenium. Because there is no space in the periodic table between these two elements, Mendeleyev suggested that the atomic mass of indium be changed to a completely different value, where it would fill an empty space between cadmium and tin. In fact, subsequent work has shown that in a periodic table, elements should not be ordered strictly by atomic mass. For example, tellurium comes before iodine in the periodic table, even though its atomic mass is slightly greater. Such anomalies are due to the relative abundance of the "isotopes" or varieties of each element. All the isotopes of a given element have the same number of protons, but differ in their number of neutrons, and hence in their atomic mass. The isotopes of a given element have the same chemical properties but slightly different physical properties. We now know that atomic number (the number of protons in the nucleus), not atomic mass number (the number of protons and neutrons), determines chemical behavior. 【TPO16- Development of the Periodic Table】

7. The phrase “abundance” in the passage is closest in meaning to (3)

○weight

○requirement

○plenty

○sequence

Paragraph 3: Mendeleyev went further than Meyer in another respect: he predicted the properties of six elements yet to be discovered. For example, a gap just below aluminum suggested a new element would be found with properties analogous to those of aluminum. Mendeleyev designated this element "eka-aluminum" (eka is the Sanskrit word for "next") and predicted its properties. Just five years later an element with the proper atomic mass was isolated and named gallium by its discoverer. The close correspondence between the observed properties of gallium and Mendeleye Vs predictions for eka-aluminum lent strong support to the periodic law. Additional support came in 1885 when eka-silicon, which had also been described in advance by Mendeleyev, was discovered and named germanium. 【TPO16- Development of the Periodic Table】

8. The phrase “analogous to” in the passage is closest in meaning to (3)

○predicted by

○expected of

○similar to

○superior to

Paragraph 4: The structure of the periodic table appeared to limit the number of possible elements. It was therefore quite surprising when John William Strut( Lord Rayleigh, discovered a gaseous element in 1894 that did not fit into the previous classification scheme. A century earlier, Henry Cavendish had noted the existence of a residual gas when oxygen and nitrogen are removed from air, but its importance had not been realized. Together with William Ramsay, Rayleigh isolated the gas (separating it from other substances into its pure state) and named it argon. Ramsay then studied a gas that was present in natural gas deposits and discovered that it was helium, an element whose presence in the Sun had been noted earlier in the spectrum of sunlight but that had not previously been known on Earth. Rayleigh and Ramsay postulated the existence of a new group of elements, and in 1898 other members of the series (neon, krypton, and xenon) were isolated. 【TPO16- Development of the Periodic Table】

12. The word “postulated” in the passage is closest in meaning to (1)

○hypothesized

○discovered

○reported

○generated

Paragraph 4: Other dimensions along which the two groups differ markedly are density and composition. The densities of the terrestrial planets average about 5 times the density of water, whereas the Jovian planets have densities that average only 1.5 times the density of water. One of the outer planets, Saturn, has a density of only 0.7 that of water, which means that Saturn would float in water. Variations in the composition of the planets are largely responsible for the density differences. The substances that make up both groups of planets are divided into three groups—gases, rocks, and ices—based on their melting points. The terrestrial planets are mostly rocks: dense rocky and metallic material, with minor amounts of gases. The Jovian planets, on the other hand, contain a large percentage of the gases hydrogen and helium, with varying amounts of ices: mostly water, ammonia, and methane ices. 【TPO16- Planets in Our Solar System】

2. The word markedly in the passage is closest in meaning to （4）

○Essentially

○Typically

○Consistently

○noticeably

Paragraph 5: The Jovian planets have very thick atmospheres consisting of varying amounts of hydrogen, helium, methane, and ammonia. By comparison, the terrestrial planets have meager atmospheres at best. A planet's ability to retain an atmosphere depends on its temperature and mass. Simply stated, a gas molecule can "evaporate" from a planet if it reaches a speed known as the escape velocity. For Earth, this velocity is 11 kilometers per second. Any material, including a rocket, must reach this speed before it can leave Earth and go into space. The Jovian planets, because of their greater masses and thus higher surface gravities, have higher escape velocities (21-60 kilometers per second) than the terrestrial planets. Consequently, it is more difficult for gases to "evaporate" from them. Also, because the molecular motion of a gas depends on temperature, at the low temperatures of the Jovian planets even the lightest gases are unlikely to acquire the speed needed to escape. On the other hand, a comparatively warm body with a small surface gravity, like Earth's moon, is unable to hold even the heaviest gas and thus lacks an atmosphere. The slightly larger terrestrial planets Earth, Venus, and Mars retain some heavy gases like carbon dioxide, but even their atmospheres make up only an infinitesimally small portion of their total mass. 【TPO16- Planets in Our Solar System】

5. The word meager in the passage is closest in meaning to （2）

○rich

○thin

○unique

○complex

Paragraph 6: The orderly nature of our solar system leads most astronomers to conclude that the planets formed at essentially the same time and from the same material as the Sun. It is hypothesized that the primordial cloud of dust and gas from which all the planets are thought to have condensed had a composition somewhat similar to that of Jupiter. However, unlike Jupiter, the terrestrial planets today are nearly void of light gases and ices. The explanation may be that the terrestrial planets were once much larger and richer in these materials but eventually lost them because of these bodies' relative closeness to the Sun, which meant that their temperatures were relatively high. 【TPO16- Planets in Our Solar System】

10. The word eventually in the passage is closest in meaning to (1)

○over time

○long ago

○simply

○certainly

**TPO-17**

Paragraph 1: In the fourteenth century, a number of political developments cut Europe's overland trade routes to southern and eastern Asia, with which Europe had had important and highly profitable commercial ties since the twelfth century. This development, coming as it did when the bottom had fallen out of the European economy, provided an impetus to a long-held desire to secure direct relations with the East by establishing a sea trade. Widely reported, if somewhat distrusted, accounts by figures like the famous traveler from Venice, Marco Polo, of the willingness of people in China to trade with Europeans and of the immensity of the wealth to be gained by such contact made the idea irresistible. Possibilities for trade seemed promising, but no hope existed for maintaining the traditional routes over land A new way had to be found. 【TPO17- Europe's Early Sea Trade with Asia】

1. The word impetus in the passage is closest in meaning to (3)

○Return

○Opportunity

○Stimulus

○Obstacle

Paragraph 2: The chief problem was technological: How were the Europeans to reach the East? Europe's maritime tradition had developed in the context of easily navigable seas—the Mediterranean, the Baltic, and, to a lesser extent, the North Sea between England and the Continent—not of vast oceans. New types of ships were needed, new methods of finding one's way, new techniques for financing so vast a scheme. The sheer scale of the investment it took to begin commercial expansion at sea reflects the immensity of the profits that such East-West trade could create Spices were the most sought-after commodities. Spices not only dramatically improved the taste of the European diet but also were used to manufacture perfumes and certain medicines. But even high-priced commodities like spices had to be transported in large bulk in order to justify the expense and trouble of sailing around the African continent all the way to India and China. 【TPO17- Europe's Early Sea Trade with Asia】

5. The word dramatically in the passage is closest in meaning to (2)

○Artificially

○Greatly

○Immediately

○Regularly

Paragraph 4: The astrolabe had long been the primary instrument for navigation, having been introduced in the eleventh century. It operated by measuring the height of the Sun and the fixed stars: by calculating the angles created by these points, it determined the degree of latitude at which one stood (The problem of determining longitude, though, was not solved until the eighteenth century.) By the early thirteenth century. Western Europeans had also developed and put into use the magnetic compass, which helped when clouds obliterated both the Sun and the stars. Also beginning in the thirteenth century, there were new maps refined by precise calculations and the reports of sailors that made it possible to trace one's path with reasonable accuracy. Certain institutional and practical norms had become established as well. A maritime code known as the Consulate of the Sea, which originated in the western Mediterranean region in the fourteenth century, won acceptance by a majority of sea goers as the normative code for maritime conduct; it defined such matters as the authority of a ship's officers, protocols of command, pay structures, the rights of sailors, and the rules of engagement when ships met one another on the sea-lanes. Thus by about 1400 the key elements were in place to enable Europe to begin its seaward adventure. 【TPO17- Europe's Early Sea Trade with Asia】

10. The word refined in the passage is closest in meaning to （2）

○Completed

○Improved

○Drawn

○Checked

11. The word norms in the passage is closest in meaning to （4）

○purposes

○skills

○activities

○rules

Paragraph 1: The daytime quality of light in forests varies with the density of the vegetation, the angle of the Sun, and the amount of cloud in the sky. Both animals and plants have different appearances in these various lighting conditions. A color or pattern that is relatively indistinct in one kind of light may be quite conspicuous in another. 【TPO17- Animal Signals in the Rain Forest】

1. The phrase conspicuous in the passage is closest in meaning to （2）

○Commom

○Noticeable

○Different

○Colorful

Paragraph 2: In the varied and constantly changing light environment of the forest, an animal must be able to send visual signals to members of its own species and at the same time avoid being detected by predators. An animal can hide from predators by choosing the light environment in which its pattern is least visible. This may require moving to different parts of the forest at different times of the day or under different weather conditions, or it may be achieved by changing color according to the changing light conditions. Many species of amphibians (frogs and toads) and reptiles (lizards and snakes) are able to change their color patterns to camouflage themselves. Some also signal by changing color. The chameleon lizard has the most striking ability to do this. Some chameleon species can change from a rather dull appearance to a full riot of carnival colors in seconds. By this means, they signal their level of aggression or readiness to mate. 【TPO17- Animal Signals in the Rain Forest】

3. The word signal in the passage is closest in meaning to （3）

○change

○imitate

○communicate

○hide

Paragraph 4: Very little light filters through the canopy of leaves and branches in a rain forest to reach ground level—or close to the ground—and at those levels the yellow-to-green wavelengths predominate. A signal might be most easily seen if it is maximally bright. In the green-to yellow lighting conditions of the lowest levels of the forest, yellow and green would be the brightest colors, but when an animal is signaling, these colors would not be very visible if the animal was sitting in an area with a yellowish or greenish background. The best signal depends not only on its brightness but also on how well it contrasts with the background against which it must be seen. In this part of the rain forest, therefore, red and orange are the best colors for signaling, and they are the colors used in signals by the ground-walking Australian brush turkey. This species, which lives in the rain forests and scrublands of the east coast of Australia, has a brown to-black plumage with bare, bright-red skin on the head and neck and a neck collar of orange-yellow loosely hanging skin. During courtship and aggressive displays, the turkey enlarges its colored neck collar by inflating sacs in the neck region and then flings about a pendulous part of the colored signaling apparatus as it utters calls designed to attract or repel. This impressive display is clearly visible in the light spectrum illuminating the forest floor. 【TPO17- Animal Signals in the Rain Forest】

8. The word inflating in the passage is closest in meaning to （2）

○Coloring

○Enlarging

○Loosening

○Heating

Paragraph 5: Less colorful birds and animals that inhabit the rain forest tend to rely on forms of signaling other than the visual, particularly over long distances. The piercing cries of the rhinoceros hornbill characterize the Southeast Asian rain forest, as do the unmistakable calls of the gibbons. In densely wooded environments, sound is the best means of communication over distance because in comparison with light, it travels with little impediment from trees and other vegetation. In forests, visual signals can be seen only at short distances, where they are not obstructed by trees. The male riflebird exploits both of these modes of signaling simultaneously in his courtship display. The sounds made as each wing is opened carry extremely well over distance and advertise his presence widely. The ritualized visual display communicates in close quarters when a female has approached. 【TPO17- Animal Signals in the Rain Forest】

11. The word impediment in the passage is closest in meaning to (1)

○obstruction

○effort

○delay

○resistance

12. The word exploits in the passage is closest in meaning to (2)

○repeats

○makes use of

○increases the intensity of

○recognizes

Paragraph 2: Parasitism is a kind of predator-prey relationship in which one organism, the parasite, derives its food at the expense of its symbiotic associate, the host. Parasites are usually smaller than their hosts. An example of a parasite is a tapeworm that lives inside the intestines of a larger animal and absorbs nutrients from its host. Natural selection favors the parasites that are best able to find and feed on hosts. At the same time, defensive abilities of hosts are also selected for. As an example, plants make chemicals toxic to fungal and bacterial parasites, along with ones toxic to predatory animals (sometimes they are the same chemicals). In vertebrates, the immune system provides a multiple defense against internal parasites. 【TPO17- Symbiotic Relationships】

2. The word derives in the passage is closest in meaning to （2）

○Digests

○Obtains

○Controls

○Discovers

Paragraph 3: At times, it is actually possible to watch the effects of natural selection in host-parasite relationships. For example, Australia during the 1940 s was overrun by hundreds of millions of European rabbits. The rabbits destroyed huge expanses of Australia and threatened the sheep and cattle industries. In 1950, myxoma virus, a parasite that affects rabbits, was deliberately introduced into Australia to control the rabbit population. Spread rapidly by mosquitoes, the virus devastated the rabbit population. The virus was less deadly to the offspring of surviving rabbits, however, and it caused less and less harm over the years. Apparently, genotypes (the genetic make-up of an organism) in the rabbit population were selected that were better able to resist the parasite. Meanwhile, the deadliest strains of the virus perished with their hosts as natural selection favored strains that could infect hosts but not kill them. Thus, natural selection stabilized this host-parasite relationship. 【TPO17- Symbiotic Relationships】

4. The word devastated in the passage is closest in meaning to （4）

○ Influenced

○ Infected

○ strengthened

○ destroyed

Paragraph 4: In contrast to parasitism, in commensalism, one partner benefits without significantly affecting the other. Few cases of absolute commensalism probably exist, because it is unlikely that one of the partners will be completely unaffected. Commensal associations sometimes involve one species' obtaining food that is inadvertently exposed by another. For instance, several kinds of birds feed on insects flushed out of the grass by grazing cattle. It is difficult to imagine how this could affect the cattle, but the relationship may help or hinder them in some way not yet recognized. 【TPO17- Symbiotic Relationships】

7. The word inadvertently in the passage is closest in meaning to （3）

○Indefensibly

○Substantially

○Unintentionally

○Partially

Paragraph 6: The complex interplay of species in symbiotic relationships highlights an important point about communities: Their structure depends on a web of diverse connections among organisms. 【TPO17- Symbiotic Relationships】

11. The word highlights in the passage is closest in meaning to （2）

○Defines

○Emphasizes

○Reflects

○Suggests

**TPO-18**

Paragraph 4: Location was an important factor for all four countries. All had immediate access to the sea, and this had important implications for a significant international resource, fish, as well as for cheap transport, merchant marines, and the shipbuilding industry. Each took advantage of these opportunities in its own way. The people of the Netherlands, with a long tradition of fisheries and mercantile shipping, had difficulty in developing good harbors suitable for steamships: eventually they did so at Rotterdam and Amsterdam, with exceptional results for transit trade with Germany and central Europe and for the processing of overseas foodstuffs and raw materials (sugar, tobacco, chocolate, grain, and eventually oil). Denmark also had an admirable commercial history, particularly with respect to traffic through the Sound (the strait separating Denmark and Sweden). In 1857, in return for a payment of 63 million kronor from other commercial nations, Denmark abolished the Sound toll dues the fees it had collected since 1497 for the use of the Sound. This, along with other policy shifts toward free trade, resulted in a significant increase in traffic through the Sound and in the port of Copenhagen. 【TPO18- Industrialization in the Netherlands and Scandinavia】

5.The word “exceptional” in the passage is closest in meaning to (1)

○ extraordinary

○ surprising

○ immediate

○ predictable

6.The word “abolished” in the passage is closest in meaning to (1)

○ ended

○ raised

○ returned

○ lowered

Paragraph 5: The political institutions of the four countries posed no significant barriers to industrialization or economic growth. The nineteenth century passed relatively peacefully for these countries, with progressive democratization taking place in all of them. They were reasonably well governed, without notable corruption or grandiose state projects, although in all of them the government gave some aid to railways, and in Sweden the state built the main lines. As small countries dependent on foreign markets, they followed a liberal trade policy in the main, though a protectionist movement developed in Sweden. In Denmark and Sweden agricultural reforms took place gradually from the late eighteenth century through the first half of the nineteenth, resulting in a new class of peasant landowners with a definite market orientation. 【TPO18- Industrialization in the Netherlands and Scandinavia】

8.The word “progressive” in the passage is closest in meaning to （3）

○ rapid

○ partial

○ increasing

○ individual

Paragraph2: Another flaw of the tiredness theory is that yawning does not raise alertness or physiological activity, as the theory would predict. When researchers measured the heart rate, muscle tension and skin conductance of people before, during and after yawning, they did detect some changes in skin conductance following yawning, indicating a slight increase in physiological activity. However, similar changes occurred when the subjects were asked simply to open their mouths or to breathe deeply. Yawning did nothing special to their state of physiological activity. Experiments have also cast serious doubt on the belief that yawning is triggered by a drop in blood oxygen or a rise in blood carbon dioxide. Volunteers were told to think about yawning while they breathed either normal air, pure oxygen, or an air mixture with an above-normal level of carbon dioxide. If the theory was correct, breathing air with extra carbon dioxide should have triggered yawning, while breathing pure oxygen should have suppressed yawning. In fact, neither condition made any difference to the frequency of yawning, which remained constant at about 24 yawns per hour. Another experiment demonstrated that physical exercise, which was sufficiently vigorous to double the rate of breathing, had no effect on the frequency of yawning. Again the implication is that yawning has little or nothing to do with oxygen. 【TPO18- The mystery of yawning】

3.The word “flaw” in the passage is closest in meaning to （1）

○ fault

○ aspect

○ confusion

○ mystery

5.The word “triggered” in the passage is closest in meaning to （4）

○ removed

○ followed

○ increased

○ caused

Paragraph3: A completely different theory holds that yawning assists in the physical development of the lungs early in life, but has no remaining biological function in adults. It has been suggested that yawning and hiccupping might serve to clear out the fetuses airways. The lungs of a fetus secrete a liquid that mixes with its mother's amniotic fluid. Babies with congenital blockages that prevent this fluid from escaping from their lungs are sometimes born with deformed lungs. It might be that yawning helps to clear out the lungs by periodically lowering the pressure in them. According to this theory, yawning in adults is just a developmental fossil with no biological function. But, while accepting that not everything in life can be explained by Darwinian evolution, there are sound reasons for being skeptical of theories like this one, which avoid the issue of what yawning does for adults. Yawning is distracting, consumes energy and takes time. It is almost certainly doing something significant in adults as well as in fetuses. What could it be? 【TPO18- The mystery of yawning】

7.The word “periodically” in the passage is closest in the meaning to (3)

○ continuously

○ quickly

○ regularly

○ carefully

Paragraph 4: The empirical evidence, such as it is, suggests an altogether different function for yawning—namely, that yawning prepares us for a change in activity level. Support for this theory came from a study of yawning behavior in everyday life. Volunteers wore wrist-mounted devices that automatically recorded their physical activity for up to two weeks: the volunteers also recorded their yawns by pressing a button on the device each time they yawned. The data showed that yawning tended to occur about 15 minutes before a period of increased behavioral activity. Yawning bore no relationship to sleep patterns, however. This accords with anecdotal evidence that people often yawn in situations where they are neither tired nor bored, but are preparing for impending mental and physical activity. Such yawning is often referred to as "incongruous" because it seems out of place, at least on the tiredness view: soldiers yawning before combat, musicians yawning before performing, and athletes yawning before competing. Their yawning seems to have nothing to do with sleepiness or boredom—quite the reverse—but it does precede a change in activity level. 【TPO18- The mystery of yawning】

10.The word “empirical” in the passage is closest in meaning to (4)

○ reliable

○ based on common sense

○ relevant

○ based on observation

Paragraph1 : Lightning is a brilliant flash of light produced by an electrical discharge from a storm cloud. The electrical discharge takes place when the attractive tension between a region of negatively charged particles and a region of positively charged particles becomes so great that the charged particles suddenly rush together. The coming together of the oppositely charged particles neutralizes the electrical tension and releases a tremendous amount of energy, which we see as lightning. The separation of positively and negatively charged particles takes place during the development of the storm cloud. 【TPO18- Lightning】

2.The word “tremendous” in the passage is closest in meaning to (3)

○ distinct

○ growing

○ huge

○ immediate

Paragraph 2: The separation of charged particles that forms in a storm cloud has a sandwich-like structure. Concentrations of positively charged particles develop at the top and bottom of the cloud, but the middle region becomes negatively charged. Recent measurements made in the field together with laboratory simulations offer a promising explanation of how this structure of charged particles forms. What happens is that small (millimeter-to centimeter-size) pellets of ice form in the cold upper regions of the cloud. When these ice pellets fall, some of them strike much smaller ice crystals in the center of the cloud. The temperature at the center of the cloud is about -15℃ or lower. At such temperatures, the collision between the ice pellets and the ice crystals causes electrical charges to shift so that the ice pellets acquire a negative charge and the ice crystals become positively charged. Then updraft wind currents carry the light, positively charged ice crystals up to the top of the cloud. The heavier negatively charged ice pellets are left to concentrate in the center. This process explains why the top of the cloud becomes positively charged, while the center becomes negatively charged. The negatively charged region is large: several hundred meters thick and several kilometers in diameter. Below this large, cold, negatively charged region, the cloud is warmer than -15℃, and at these temperatures, collisions between ice crystals and falling ice pellets produce positively charged ice pellets that then populate a small region at the base of the cloud. 【TPO18- Lightning】

4.The word “acquire” in the passage is closest in meaning to （2）

○ reject

○ obtain

○ need

○ produce

Paragraph 4: Using high-speed photography, scientists have determined that there are two steps to the occurrence of lightning from a cloud to the ground. First, a channel, or path, is formed that connects the cloud and the ground. Then a strong current of electrons follows that path from the cloud to the ground, and it is that current that illuminates the channel as the lightning we see. 【TPO18- Lightning】

8.The word “illuminates” in the passage is closet in meaning to （3）

○ opens

○ completes

○ lights

○ electrifies

Paragraph 5: The formation of the channel is initiated when electrons surge from the cloud base toward the ground. When a stream of these negatively charged electrons comes within 100 meters of the ground it is met by a stream of positively charged particles that comes up from the ground. When the negatively and positively charged streams meet, a complete channel connecting the cloud and the ground is formed. The channel is only a few centimeters in diameter, but that is wide enough for electrons to follow the channel to the ground in the visible form of a flash of lightning. The stream of positive particles that meets the surge of electrons from the cloud often arises from a tall pointed structure such as a metal flagpole or a tower. That is why the subsequent lightning that follows the completed channel often strikes a tall structure. 【TPO18- Lightning】

12.The word “initiated” is closet in meaning to （1）

○ started

○ intensified

○ finished

○ expected

**TPO-19**

Paragraph 1: In the wake of the Roman Empire's conquest of Britain in the first century A.D., a large number of troops stayed in the new province, and these troops had a considerable impact on Britain with their camps, fortifications, and participation in the local economy. Assessing the impact of the army on the civilian population starts from the realization that the soldiers were always unevenly distributed across the country. Areas rapidly incorporated into the empire were not long affected by the military. Where the army remained stationed, its presence was much more influential. The imposition of a military base involved the requisition of native lands for both the fort and the territory needed to feed and exercise the soldiers' animals. The imposition of military rule also robbed local leaders of opportunities to participate in local government, so social development was stunted and the seeds of disaffection sown. This then meant that the military had to remain to suppress rebellion and organize government. 【TPO19- The Roman Army's Impact on Britain】

4.The word “suppress” in the passage is closest in meaning to （4）

○ respond to

○ warn against

○ avoid the impact of

○ stop by force

Paragraph 2: Economic exchange was clearly very important as the Roman army brought with it very substantial spending power. Locally a fort had two kinds of impact. Its large population needed food and other supplies. Some of these were certainly brought from long distances, but demands were inevitably placed on the local area. Although goods could be requisitioned, they were usually paid for, and this probably stimulated changes in the local economy. When not campaigning, soldiers needed to be occupied; otherwise they represented a potentially dangerous source of friction and disloyalty. Hence a writing tablet dated 25 April tells of 343 men at one fort engaged on tasks like shoemaking, building a bathhouse, operating kilns, digging clay, and working lead. Such activities had a major effect on the local area, in particular with the construction of infrastructure such as roads, which improved access to remote areas. 【TPO19- The Roman Army's Impact on Britain】

5. The word “friction” in the passage is closest in meaning to （2）

○ rebellion

○ conflict

○ neglect

○ crime

Paragraph 3: Each soldier received his pay, but in regions without a developed economy there was initially little on which it could be spent. The pool of excess cash rapidly stimulated a thriving economy outside fort gates. Some of the demand for the services and goods was no doubt fulfilled by people drawn from far afield, but some local people certainly became entwined in this new economy. There was informal marriage with soldiers, who until AD 197 were not legally entitled to wed, and whole new communities grew up near the forts. These settlements acted like small towns, becoming centers for the artisan and trading populations. 【TPO19- The Roman Army's Impact on Britain】

7.The phrase “entitled to” in the passage is closest in meaning to （1）

○ given the right to

○ able to afford to

○ encouraged to

○ required to

Paragraph 5: This process of settling in as a community over several generations, combined with local recruitment, presumably accounts for the apparent stability of the British northern frontier in the later Roman period. It also explains why some of the forts continued in occupation long after Rome ceased to have any formal authority in Britain, at the beginning of the fifth century A.D. The circumstances that had allowed natives to become Romanized also led the self-sustaining military community of the frontier area to become effectively British. 【TPO19- The Roman Army's Impact on Britain】

12.The word “circumstances” in the passage is closest in meaning to (3)

○ experiences

○ communities

○ conditions

○ laws

Paragraph 2: Clements and other early ecologists saw almost lawlike regularity in the order of succession, but that has not been substantiated. A general trend can be recognized, but the details are usually unpredictable. Succession is influenced by many factors: the nature of the soil, exposure to sun and wind, regularity of precipitation, chance colonizations, and many other random processes. 【TPO19- Succession, Climax, and Ecosystems】

2.The word “substantiated” in the passage is closest in meaning to （1）

* confirmed
* noticed
* defined
* publicized

3.The word “trend” in the passage is closest in meaning to （4）

* probability
* picture
* lawlike regularity
* tendency

Paragraph 3: The final stage of a succession, called the climax by Clements and early ecologists, is likewise not predictable or of uniform composition. There is usually a good deal of turnover in species composition, even in a mature community. The nature of the climax is influenced by the same factors that influenced succession. Nevertheless, mature natural environments are usually in equilibrium. They change relatively little through time unless the environment itself changes. 【TPO19- Succession, Climax, and Ecosystems】

4.The word “likewise” in the passage is closest in meaning to (2)

* sometimes
* similarly
* apparently
* consequently

Paragraph 4: For Clements, the climax was a "superorganism," an organic entity. Even some authors who accepted the climax concept rejected Clements' characterization of it as a superorganism, and it is indeed a misleading metaphor. An ant colony may be legitimately called a superorganism because its communication system is so highly organized that the colony always works as a whole and appropriately according to the circumstances. But there is no evidence for such an interacting communicative network in a climax plant formation. Many authors prefer the term "association" to the term "community" in order to stress the looseness of the interaction. 【TPO19- Succession, Climax, and Ecosystems】

5.The word “legitimately” in the passage is closest in meaning to （3）

* commonly
* broadly
* properly
* officially

Paragraph 5: Even less fortunate was the extension of this type of thinking to include animals as well as plants. This resulted in the "biome," a combination of coexisting flora and fauna. Though it is true that many animals are strictly associated with certain plants, it is misleading to speak of a "spruce-moose biome," for example, because there is no internal cohesion to their association as in an organism. The spruce community is not substantially affected by either the presence or absence of moose. Indeed, there are vast areas of spruce forest without moose. The opposition to the Clementsian concept of plant ecology was initiated by Herbert Gleason, soon joined by various other ecologists. Their major point was that the distribution of a given species was controlled by the habitat requirements of that species and that therefore the vegetation types were a simple consequence of the ecologies of individual plant species. 【TPO19- Succession, Climax, and Ecosystems】

9.The word “initiated” in the passage is closest in meaning to(3)

* approved
* identified
* started
* foreseen

Paragraph 1: In the middle of the nineteenth century, Louis Agassiz, one of the first scientists to study glaciers, immigrated to the United States from Switzerland and became a professor at Harvard University, where he continued his studies in geology and other sciences. For his research, Agassiz visited many places in the northern parts of Europe and North America, from the mountains of Scandinavia and New England to the rolling hills of the American Midwest. In all these diverse regions, Agassiz saw signs of glacial erosion and sedimentation. In flat plains country, he saw moraines (accumulations of earth and loose rock that form at the edges of glaciers) that reminded him of the terminal moraines found at the end of valley glaciers in the Alps. The heterogeneous material of the drift (sand, clay, and rocks deposited there) convinced him of its glacial origin. 【TPO19- Discovering the Ice Ages】

1.The word “accumulations” in the passage is closest in meaning to (4)

* signs
* pieces
* types
* deposits

2.The word “heterogeneous” in the passage is closest in meaning to (2)

* remaining
* varied
* familiar
* layered

Paragraph 2: The areas covered by this material were so vast that the ice that deposited it must have been a continental glacier larger than Greenland or Antarctica. Eventually, Agassiz and others convinced geologists and the general public that a great continental glaciation had extended the polar ice caps far into regions that now enjoy temperate climates. For the first time, people began to talk about ice ages. It was also apparent that the glaciation occurred in the relatively recent past because the drift was soft, like freshly deposited sediment. We now know the age of the glaciation accurately from radiometric dating of the carbon-14 in logs buried in the drift. The drift of the last glaciation was deposited during one of the most recent epochs of geologic time, the Pleistocene, which lasted from 1.8 million to 10,000 years ago. Along the east coast of the United States, the southernmost advance of this ice is recorded by the enormous sand and drift deposits of the terminal moraines that form Long Island and Cape Cod. 【TPO19- Discovering the Ice Ages】

4.The word “enjoy” in the passage is closest in meaning to (1)

* experience
* resemble
* expect
* dominate

Paragraph 4: This idea was modified in the late twentieth century, when geologists and oceanographers examining oceanic sediment found fossil evidence of warming and cooling of the oceans. Ocean sediments presented a much more complete geologic record of the Pleistocene than continental glacial deposits did. The fossils buried in Pleistocene and earlier ocean sediments were of foraminifera—small, single-celled marine organisms that secrete shells of calcium carbonate, or calcite. These shells differ in their proportion of ordinary oxygen (oxygen-16) and the heavy oxygen isotope (oxygen-18). The ratio of oxygen-16 to oxygen-18 found in the calcite of a foraminifer's shell depends on the temperature of the water in which the organism lived. Different ratios in the shells preserved in various layers of sediment reveal the temperature changes in the oceans during the Pleistocene epoch. 【TPO19- Discovering the Ice Ages】

8.The word “reveal” in the passage is closest in meaning to （3）

* result from
* vary with
* show
* preserve

**TPO-20**

Paragraph 2: Why were these hundreds of thousands of settlers—most of them farmers, some of them artisans—drawn away from the cleared fields and established cities and villages of the East? Certain characteristics of American society help to explain this remarkable migration. The European ancestors of some Americans had for centuries lived rooted to the same village or piece of land until some religious, political, or economic crisis uprooted them and drove them across the Atlantic. Many of those who experienced this sharp break thereafter lacked the ties that had bound them and their ancestors to a single place. Moreover, European society was relatively stratified; occupation and social status were inherited. In American society, however, the class structure was less rigid; some people changed occupations easily and believed it was their duty to improve their social and economic position. As a result, many Americans were an inveterately restless, rootless, and ambitious people. Therefore, these social traits helped to produce the nomadic and daring settlers who kept pushing westward beyond the fringes of settlement. In addition, there were other immigrants who migrated west in search of new homes, material success, and better lives. 【TPO20- Westward Migration】

3.The word "fringes" in the passage is closest in meaning to (1)

* borders
* groups
* types
* directions

Paragraph 3: The West had plenty of attractions: the alluvial river bottoms, the fecund soils of the rolling forest lands, the black loams of the prairies were tempting to New England farmers working their rocky, sterile land and to southeastern farmers plagued with soil depletion and erosion. In 1820 under a new land law, a farm could be bought for $100. The continued proliferation of banks made it easier for those without cash to negotiate loans in paper money. Western Farmers borrowed with the confident expectation that the expanding economy would keep farm prices high, thus making it easy to repay loans when they fell due. 【TPO20- Westward Migration】

7.The word "proliferation" in the passage is closest in meaning to （1）

* growth
* cooperation
* importance
* success

Paragraph 5: Two other developments presaged the end of the era of turnpikes and started a transportation revolution that resulted in increased regional specialization and the growth of a national market economy. First came the steamboat; although flatboats and keelboats continued to be important until the 1850’s steamboats eventually superseded all other craft in the carrying of passengers and freight. Steamboats were not only faster but also transported upriver freight for about one tenth of what it had previously cost on hand-propelled keelboats. Next came the Erie Canal, an enormous project in its day, spanning about 350 miles. After the canal went into operation, the cost per mile of transporting a ton of freight from Buffalo to New York City declined from nearly 20 cents to less than 1 cent. Eventually, the western states diverted much of their produce from the rivers to the Erie Canal, a shorter route to eastern markets. 【TPO20- Westward Migration】

9.The word "superseded" in the passage is closest in meaning to （1）

* replaced
* reformed
* equaled
* increased

10.The word "diverted" in the passage is closest in meaning to （2）

* collected
* shifted
* transported
* sold

Paragraph 1: The universal global warming at the end of the Ice Age had dramatic effects on temperate regions of Asia, Europe, and North America. Ice sheets retreated and sea levels rose. The climatic changes in southwestern Asia were more subtle, in that they involved shifts in mountain snow lines, rainfall patterns, and vegetation cover. However, these same cycles of change had momentous impacts on the sparse human populations of the region. At the end of the Ice Age, no more than a few thousand foragers lived along the eastern Mediterranean coast, in the Jordan and Euphrates valleys. Within 2,000 years, the human population of the region numbered in the tens of thousands, all as a result of village life and farming. Thanks to new environmental and archaeological discoveries, we now know something about this remarkable change in local life. 【TPO20-Early Settlements in the Southwest Asia】

1.The word "momentous" in the passage is closest in meaning to (3)

* numerous
* regular
* very important
* very positive

Paragraph 2: Pollen samples from freshwater lakes in Syria and elsewhere tell us forest cover expanded rapidly at the end of the Ice Age, for the southwestern Asian climate was still cooler and considerably wetter than today. Many areas were richer in animal and plant species than they are now, making them highly favorable for human occupation. About 9000 B.C., most human settlements lay in the area along the Mediterranean coast and in the Zagros Mountains of Iran and their foothills. Some local areas, like the Jordan River valley, the middle Euphrates valley, and some Zagros valleys, were more densely populated than elsewhere. Here more sedentary and more complex societies flourished. These people exploited the landscape intensively, foraging on hill slopes for wild cereal grasses and nuts, while hunting gazelle and other game on grassy lowlands and in river valleys. Their settlements contain exotic objects such as seashells, stone bowls, and artifacts made of obsidian (volcanic glass), all traded from afar. This considerable volume of intercommunity exchange brought a degree of social complexity in its wake. 【TPO20-Early Settlements in the Southwest Asia】

4.The word "exploited" in the passage is closest in meaning to（2）

* explored
* utilized
* inhabited
* improved

Paragraph 3: Thanks to extremely fine-grained excavation and extensive use of flotation methods (through which seeds are recovered from soil samples), we know a great deal about the foraging practices of the inhabitants of Abu Hureyra in Syria's Euphrates valley. Abu Hureyra was founded about 9500B.C, a small village settlement of cramped pit dwellings (houses dug partially in the soil) with reed roofs supported by wooden uprights. For the next 1,500 years, its inhabitants enjoyed a somewhat warmer and damper climate than today, living in a well-wooded steppe area where wild cereal grasses were abundant. They subsisted off spring migrations of Persian gazelles from the south. With such a favorable location, about 300 to 400 people lived in a sizable, permanent settlement. They were no longer a series of small bands but lived in a large community with more elaborate social organization, probably grouped into clans of people of common descent. 【TPO20-Early Settlements in the Southwest Asia】

6.The word "cramped" in the passage is closest in meaning to （4）

* primitive
* secure
* extended
* confined

Paragraph 4: The flotation samples from the excavations allowed botanists to study shifts in plant-collecting habits as if they were looking through a telescope at a changing landscape. Hundreds of tiny plant remains show how the inhabitants exploited nut harvests in nearby pistachio and oak forests. However, as the climate dried up, the forests retreated from the vicinity of the settlement. The inhabitants turned to wild cereal grasses instead, collecting them by the thousands, while the percentage of nuts in the diet fell. By 8200B.C., drought conditions were so severe that the people abandoned their long-established settlement, perhaps dispersing into smaller camps. 【TPO20-Early Settlements in the Southwest Asia】

8.The word "shifts" in the passage is closest in meaning to (3)

* effects
* similarities
* changes
* exceptions

Paragraph 5: Five centuries later, about 7700B.C., a new village rose on the mound. At first the inhabitants still hunted gazelle intensively. Then, about 7000 B.C., within the space of a few generations, they switched abruptly to herding domesticated goats and sheep and to growing einkorn, pulses, and other cereal grasses. Abu Hureyra grew rapidly until it covered nearly 30 acres. It was a close-knit community of rectangular, one-story mud-brick houses, joined by narrow lanes and courtyards, finally abandoned about 5000 B.C.. Many complex factors led to the adoption of the new economies, not only at Abu Hureyra, but at many other locations such as 'Ain Ghazal, also in Syria, where goat toe bones showing the telltale marks of abrasion caused by foot tethering (binding) testify to early herding of domestic stock. 【TPO20-Early Settlements in the Southwest Asia】

11.The word "abruptly" in the passage is closest in meaning to(3)

* informally
* briefly
* suddenly
* surprisingly

Paragraph 1: When one considers the many ways by which organisms are completely destroyed after death, it is remarkable that fossils are as common as they are. Attack by scavengers and bacteria, chemical decay, and destruction by erosion and other geologic agencies make the odds against preservation very high. However, the chances of escaping complete destruction are vastly improved if the organism happens to have a mineralized skeleton and dies in a place where it can be quickly buried by sediment. Both of these conditions are often found on the ocean floors, where shelled invertebrates (organisms without spines) flourish and are covered by the continuous rain of sedimentary particles. Although most fossils are found in marine sedimentary rocks, they also are found in terrestrial deposits left by streams and lakes. On occasion, animals and plants have been preserved after becoming immersed in tar or quicksand, trapped in ice or lava flows, or engulfed by rapid falls of volcanic ash. 【TPO20- Fossil Preservation】

1. The word "agencies" in the passage is closest in meaning to (3)

* combinations
* problems
* forces
* changes

3.The word "terrestrial" in the passage is closest in meaning to (1)

* land
* protected
* alternative
* similar

Paragraph 3: Many other processes may after the shell of a clam or snail and enhance its chances for preservation. Water containing dissolved silica, calcium carbonate, or iron may circulate through the enclosing sediment and be deposited in cavities such as marrow cavities and canals in bone once occupied by blood vessels and nerves. In such cases, the original composition of the bone or shell remains, but the fossil is made harder and more durable. This addition of a chemically precipitated substance into pore spaces is termed "permineralization." 【TPO20- Fossil Preservation】

6.The word "enhance" in the passage is closest in meaning to（4）

* control
* limit
* combine
* Increase

Paragraph 4: Petrifaction may also involve a simultaneous exchange of the original substance of a dead plant or animal with mineral matter of a different composition. This process is termed " replacement" because solutions have dissolved the original material and replaced it with an equal volume of the new substance. Replacement can be a marvelously precise process, so that details of shell ornamentation, tree rings in wood, and delicate structures in bone are accurately preserved. 【TPO20- Fossil Preservation】

8.The word "precise" in the passage is closest in meaning to（3）

* complex
* quick
* exact
* reliable

Paragraph 6: Although it is certainly true that the possession of hard parts enhances the prospect of preservation, organisms having soft tissues and organs are also occasionally preserved. Insects and even small invertebrates have been found preserved in the hardened resins of conifers and certain other trees. X-ray examination of thin slabs of rock sometimes reveals the ghostly outlines of tentacles, digestive tracts, and visual organs of a variety of marine creatures. Soft parts, including skin, hair, and viscera of ice age mammoths, have been preserved in frozen soil or in the oozing tar of oil seeps. 【TPO20- Fossil Preservation】

10.The word "prospect" in the passage is closest in meaning to （3）

* completion
* variety
* possibility
* speed

**TPO-21**

Paragraph 1: Earth's internal heat, fueled by radioactivity, provides the energy for plate tectonics and continental drift, mountain building, and earthquakes. It can also be harnessed to drive electric generators and heat homes. Geothermal energy becomes available in a practical form when underground heat is transferred by water that is heated as it passes through a subsurface region of hot rocks (a heat reservoir) that may be hundreds or thousands of feet deep. The water is usually naturally occurring groundwater that seeps down along fractures in the rock; less typically, the water is artificially introduced by being pumped down from the surface. The water is brought to the surface, as a liquid or steam, through holes drilled for the purpose. 【TPO21- Geothermal Energy】

2.The word "practical" in the passage is closest in meaning to (1)

* usable
* plentiful
* economical
* familiar

Paragraph 2: By far the most abundant form of geothermal energy occurs at the relatively low temperatures of 80° to 180° centigrade. Water circulated through heat reservoirs in this temperature range is able to extract enough heat to warm residential, commercial, and industrial spaces. More than 20,000 apartments in France are now heated by warm underground water drawn from a heat reservoir in a geologic structure near Paris called the Paris Basin. Iceland sits on a volcanic structure known as the Mid-Atlantic Ridge. Reykjavik, the capital of Iceland, is entirely heated by geothermal energy derived from volcanic heat. 【TPO21- Geothermal Energy】

3.The word "abundant" in the passage is closest in meaning to (3)

* economical
* familiar
* plentiful
* useful

Paragraph 4: Extracting heat from very hot, dry rocks presents a more difficult problem: the rocks must be fractured to permit the circulation of water, and the water must be provided artificially. The rocks are fractured by water pumped down at very high pressures. Experiments are under way to develop technologies for exploiting this resource. 【TPO21- Geothermal Energy】

9.The word "exploiting" in the passage is closest in meaning to(3)

* locating
* increasing
* making use of
* estimating the size of

Paragraph 1: How did it come about that farming developed independently in a number of world centers (the Southeast Asian mainland, Southwest Asia, Central America, lowland and highland South America, and equatorial Africa) at more or less the same time? Agriculture developed slowly among populations that had an extensive knowledge of plants and animals. Changing from hunting and gathering to agriculture had no immediate advantages. To start with, it forced the population to abandon the nomad's life and become sedentary, to develop methods of storage and, often, systems of irrigation. While hunter-gatherers always had the option of moving elsewhere when the resources were exhausted, this became more difficult with farming. Furthermore, as the archaeological record shows, the state of health of agriculturalists was worse than that of their contemporary hunter-gatherers. 【TPO21- The Origins of Agriculture】

1.The word "option" in the passage is closest in meaning to （1）

* choice
* benefit
* idea
* experience

Paragraph 2: Traditionally, it was believed that the transition to agriculture was the result of a worldwide population crisis. It was argued that once hunter-gatherers had occupied the whole world, the population started to grow everywhere and food became scarce; agriculture would have been a solution to this problem. We know, however, that contemporary hunter-gatherer societies control their population in a variety of ways. The idea of a world population crisis is therefore unlikely, although population pressure might have arisen in some areas. 【TPO21- The Origins of Agriculture】

3.The word "therefore" in the passage is closest in meaning to （4）

* in theory
* obviously
* frequently
* as a result

Paragraph 5: It is archaeologist Steven Mithen's thesis, brilliantly developed in his book *The Prehistory of the Mind* (1996), that approximately 40,000 years ago the human mind developed cognitive fluidity, that is, the integration of the specializations of the mind: technical, natural history (geared to understanding the behavior and distribution of natural resources), social intelligence, and the linguistic capacity. Cognitive fluidity explains the appearance of art, religion, and sophisticated speech. Once humans possessed such a mind, they were able to find an imaginative solution to a situation of severe economic crisis such as the farming dilemma described earlier. Mithen proposes the existence of four mental elements to account for the emergence of farming: (1) the ability to develop tools that could be used intensively to harvest and process plant resources; (2) the tendency to use plants and animals as the medium to acquire social prestige and power; (3) the tendency to develop "social relationships" with animals structurally similar to those developed with people—specifically, the ability to think of animals as people (anthropomorphism) and of people as animals (totemism); and (4) the tendency to manipulate plants and animals. 【TPO21- The Origins of Agriculture】

9.The word "imaginative" in the passage is closest in meaning to （2）

* complex
* creative
* immediate
* reliable

Paragraph 6: The fact that some societies domesticated animals and plants, discovered the use of metal tools, became literate, and developed a state should not make us forget that others developed pastoralism or horticulture (vegetable gardening) but remained illiterate and at low levels of productivity; a few entered the modern period as hunting and gathering societies. It is anthropologically important to inquire into the conditions that made some societies adopt agriculture while others remained hunter-gatherers or horticulturalists. However, it should be kept in mind that many societies that knew of agriculture more or less consciously avoided it. Whether Mithen's explanation is satisfactory is open to contention, and some authors have recently emphasized the importance of other factors. 【TPO21- The Origins of Agriculture】

11.The word "contention" in the passage is closest in meaning to (3)

* investigation
* improvement
* debate
* interpretation

Paragraph 1: Think back to your childhood and try to identify your earliest memory. How old were you? Most people are not able to recount memories for experiences prior to the age of three years, a phenomenon called infantile amnesia. The question of why infantile amnesia occurs has intrigued psychologists for decades, especially in light of ample evidence that infants and young children can display impressive memory capabilities. Many find that understanding the general nature of autobiographical memory, that is, memory for events that have occurred in one's own life, can provide some important clues to this mystery. Between ages three and four, children begin to give fairly lengthy and cohesive descriptions of events in their past. What factors are responsible for this developmental turning point? 【TPO21- Autobiographical Memory】

1.The word "ample" in the passage is closest in meaning to（3）

* surprising
* convincing
* plentiful
* questionable

Paragraph 3: Another suggestion is that before children can talk about past events in their lives, they need to have a reasonable understanding of the self as a psychological entity. The development of an understanding of the self becomes evident between the first and second years of life and shows rapid elaboration in subsequent years. The realization that the physical self has continuity in time, according to this hypothesis, lays the foundation for the emergence of autobiographical memory. 【TPO21- Autobiographical Memory】

5.The word "reasonable" in the passage is closest in meaning to（2）

* consistent
* sufficient
* apparent
* deep

6.The word "elaboration" in the passage is closest in meaning to（1）

* development
* specialization
* use
* transformation

**TPO-22**

Paragraph 3: Spartina is an exceedingly competitive plant. It spreads primarily by underground stems; colonies form when pieces of the root system or whole plants float into an area and take root or when seeds float into a suitable area and germinate. Spartina establishes itself on substrates ranging from sand and silt to gravel and cobble and is tolerant of salinities ranging from that of near freshwater (0.05 percent) to that of salt water (3.5 percent). Because they lack oxygen, marsh sediments are high in sulfides that are toxic to most plants. Spartina has the ability to take up sulfides and convert them to sulfate, a form of sulfur that the plant can use; this ability makes it easier for the grass to colonize marsh environments. Another adaptive advantage is Spartina’s ability to use carbon dioxide more efficiently than most other plants. 【TPO22- Spartina】

5.The word "exceedingly" in the passage is closest in meaning to (4)

* unusually
* dangerously
* surprisingly
* highly

Paragraph 5: Spartina was transported to Washington State in packing materials for oysters transplanted from the east coast in 1894. Leaving its insect predators behind, the cordgrass has been spreading slowly and steadily along Washington’s tidal estuaries on the west coast, crowding out the native plants and drastically altering the landscape by trapping sediment. Spartina modifies tidal mudflats, turning them into high marshes inhospitable to the many fish and waterfowl that depend on the mudflats. It is already hampering the oyster harvest and the Dungeness crab fishery, and it interferes with the recreational use of beaches and waterfronts. Spartina has been transplanted to England and to New Zealand for land reclamation and shoreline stabilization. In New Zealand the plant has spread rapidly, changing mudflats with marshy fringes to extensive salt meadows and reducing the number and kinds of birds and animals that use the marsh. 【TPO22- Spartina】

10.The word "modifies" in the passage is closest in meaning to (2)

* creates
* changes
* grows on
* breaks down

Paragraph 6: Efforts to control Spartina outside its natural environment have included burning, flooding, shading plants with black canvas or plastic, smothering the plants with dredged materials or clay, applying herbicide, and mowing repeatedly. Little success has been reported in New Zealand and England; Washington State’s management program has tried many of these methods and is presently using the herbicide glyphosphate to control its spread. Work has begun to determine the feasibility of using insects as biological controls, but effective biological controls are considered years away. Even with a massive effort, it is doubtful that complete eradication of Spartina from nonnative habitats is possible, for it has become an integral part of these shorelines and estuaries during the last 100 to 200 years. 【TPO22- Spartina】

12.The word "Efforts" in the passage is closest in meaning to (3)

* Laws
* Suggestions
* Attempts
* Failures

Paragraph 4: The two processes produced very different results. The daguerreotype was a unique image that reproduced what was in front of the camera lens in minute, unselective detail and could not be duplicated. The calotype could be made in series, and was thus the equivalent of an etching or an engraving. Its general effect was soft edged and tonal. 【TPO22- The Birth of Photography】

3.The word "duplicated" in the passage is closest in meaning to (1)

* copied
* replaced
* handled
* clarified

Paragraph 5: One of the things that most impressed the original audience for photography was the idea of authenticity. Nature now seemed able to speak for itself, with a minimum of interference. The title Talbot chose for his book, *The Pencil of Nature* (the first part of which was published in 1844), reflected this feeling. Artists were fascinated by photography because it offered a way of examining the world in much greater detail. They were also afraid of it, because it seemed likely to make their own efforts unnecessary. 【TPO22- The Birth of Photography】

5.The word "authenticity" in the passage is closest in meaning to (3)

* improvement
* practicality
* genuineness
* repetition

Paragraph 7: In the long term, photography's impact on the visual arts was far from simple. Because the medium was so prolific, in the sense that it was possible to produce a multitude of images very cheaply, it was soon treated as the poor relation of fine art, rather than its destined successor. Even those artists who were most dependent on photography became reluctant to admit that they made use of it, in case this compromised their professional standing. 【TPO22- The Birth of Photography】

7.The word "reluctant" in the passage is closest in meaning to (4)

* unable
* embarrassed
* unlikely
* unwilling

Paragraph 8: The rapid technical development of photography—the introduction of lighter and simpler equipment, and of new emulsions that coated photographic plates, film, and paper and enabled images to be made at much faster speeds—had some unanticipated consequences. Scientific experiments made by photographers such as Eadweard Muybridge (1830-1904) and Etienne-Jules Marey (1830-1904) demonstrated that the movements of both humans and animals differed widely from the way they had been traditionally represented in art. Artists, often reluctantly, were forced to accept the evidence provided by the camera. The new candid photography—unposed pictures that were made when the subjects were unaware that their pictures were being taken—confirmed these scientific results, and at the same time, thanks to the radical cropping (trimming) of images that the camera often imposed, suggested new compositional formats. The accidental effects obtained by candid photographers were soon being copied by artists such as the French painter Degas. 【TPO22- The Birth of Photography】

9.The word "unanticipated" in the passage is closest in meaning to(2)

* indirect
* not expected
* unquestionable
* beneficial

10.The word "accidental" in the passage is closest in meaning to (2)

* surprising
* unintentional
* realistic
* unusual

Paragraph 1: Sometime after midnight on February 8,1969, a large, bright meteor entered Earth's atmosphere and broke into thousands of pieces, plummeted to the ground, and scattered over an area 50 miles long and 10 miles wide in the state of Chihuahua in Mexico. The first meteorite from this fall was found in the village of Pueblito de Allende. Altogether, roughly two tons of meteorite fragments were recovered, all of which bear the name Allende for the location of the first discovery. 【TPO22- The Allende Meteorite】

1.The word "location' in the passage is closest in meaning to(4)

* sight
* sake
* success
* place

Paragraph 3: The Allende meteorite is classified as a chondrite. Chondrites take their name from the Greek word *chondros*—meaning "seed"—an allusion to their appearance as rocks containing tiny seeds. These seeds are actually chondrules: millimeter-sized melted droplets of silicate material that were cooled into spheres of glass and crystal. A few chondrules contain grains that survived the melting event, so these enigmatic chondrules must have formed when compact masses of nebular dust were fused at high temperatures—approaching 1,700 degrees Celsius—and then cooled before these surviving grains could melt. Study of the textures of chondrules confirms that they cooled rather quickly, in times measured in minutes or hours, so the heating events that formed them must have been localized. It seems very unlikely that large portions of the nebula were heated to such extreme temperatures, and huge nebula areas could not possibly have lost heat so fast. Chondrules must have been melted in small pockets of the nebula that were able to lose heat rapidly. The origin of these peculiar glassy spheres remains an enigma. 【TPO22- The Allende Meteorite】

4.The word "allusion" in the passage is closest in meaning to(4)

* addition
* modification
* resemblance
* reference

5.The word "enigmatic" in the passage is closest in meaning to(2)

* dangerous
* mysterious
* interesting
* surprising

Paragraph 5: Chondrules and inclusions in Allende are held together by the chondrite matrix, a mixture of fine-grained, mostly silicate minerals that also includes grains of iron metal and iron sulfide. At one time it was thought that these matrix grains might be pristine nebular dust, the sort of stuff from which chondrules and inclusions were made. However, detailed studies of the chondrite matrix suggest that much of it, too, has been formed by condensation or melting in the nebula, although minute amounts of surviving interstellar dust are mixed with the processed materials. 【TPO22- The Allende Meteorite】

8.The word "pristine" in the passage is closest in meaning to(1)

* pure
* solid
* ordinary
* trapped

**TPO-23**

Paragraph 1: The city is an extraordinary processor of mass and energy and has its own metabolism. A daily input of water, food, and energy of various kinds is matched by an output of sewage, solid waste, air pollutants, energy, and materials that have been transformed in some way. The quantities involved are enormous. Many aspects of this energy use affect the atmosphere of a city, particularly in the production of heat. 【TPO23- Urban Climates】

1. The word “enormous” in the passage is closest in meaning to (3)

○ growing

○ frightening

○ very large

○ strictly controlled

Paragraph 2: In winter the heat produced by a city can equal or surpass the amount of heat available from the Sun. All the heat that warms a building eventually transfers to the surrounding air, a process that is quickest where houses are poorly insulated. But an automobile produces enough heat to warm an average house in winter, and if a house were perfectly insulated, one adult could also produce more than enough heat to warm it. Therefore, even without any industrial production of heat, an urban area tends to be warmer than the countryside that surrounds it. 【TPO23- Urban Climates】

2. The word “surpass” in the passage is closest in meaning to （2）

○ remain below

○ be higher than

○ add to

○ come close to

Paragraph 4: Cities, then, are warmer than the surrounding rural areas, and together they produce a phenomenon known as the urban heat island. Heat islands develop best under particular conditions associated with light winds, but they can form almost any time. The precise configuration of a heat island depends on several factors. For example, the wind can make a heat island stretch in the direction it blows. When a heat island is well developed, variations can be extreme; in winter, busy streets in cities can be 1.7℃ warmer than the side streets. Areas near traffic lights can be similarly warmer than the areas between them because of the effect of cars standing in traffic instead of moving. The maximum differences in temperature between neighboring urban and rural environments is called the heat-island intensity for that region. In general, the larger the city, the greater its heat-island intensity. The actual level of intensity depends on such factors as the physical layout, population density, and productive activities of a metropolis. 【TPO23- Urban Climates】

7.The word “configuration” in the passage is closest in meaning to (4)

○ location

○ history

○ temperature

○ shape

Paragraph 5: The surface-atmosphere relationships inside metropolitan areas produce a number of climatic peculiarities. For one thing, the presence or absence of moisture is affected by the special qualities of the urban surface. With much of the built-up landscape impenetrable by water, even gentle rain runs off almost immediately from rooftops, streets, and parking lots. Thus, city surfaces, as well as the air above them, tend to be drier between episodes of rain; with little water available for the cooling process of evaporation, relative humidities are usually lower. Wind movements are also modified in cities because buildings increase the friction on air flowing around them. This friction tends to slow the speed of winds, making them far less efficient at dispersing pollutants. On the other hand, air turbulence increases because of the effect of skyscrapers on airflow. Rainfall is also increased in cities. The cause appears to be in part greater turbulence in the urban atmosphere as hot air rises from the built-up surface. 【TPO23- Urban Climates】

11. The word “modified” in the passage is closest in meaning to (4)

○ changed

○ blocked

○ increased

○ weakened

Paragraph 2: Apart from this, being able to give up labor-intensive grain production freed both the land and the workforce for more productive agricultural divisions. The peasants specialized in livestock husbandry and dairy farming as well as in cultivating industrial crops and fodder crops: flax, madder, and rape were grown, as were tobacco, hops, and turnips. These products were bought mostly by urban businesses. There was also a demand among urban consumers for dairy products such as butter and cheese, which, in the sixteenth century, had become more expensive than grain. The high prices encouraged the peasants to improve their animal husbandry techniques; for example, they began feeding their animals indoors in order to raise the milk yield of their cows. 【TPO23- Seventeenth-Century Dutch Agriculture】

3. The phrase “Apart from” in the passage is closest in meaning to(1)

○ Besides

○ Despite

○ As a result of

○ Instead of

Paragraph 3: In addition to dairy farming and cultivating industrial crops, a third sector of the Dutch economy reflected the way in which agriculture was being modernized-horticulture. In the sixteenth century, fruit and vegetables were to be found only in gardens belonging to wealthy people. This changed in the early part of the seventeenth century when horticulture became accepted as an agricultural sector. Whole villages began to cultivate fruit and vegetables. The produce was then transported by water to markets in the cities, where the consumption of fruit and vegetables was no longer restricted to the wealthy. 【TPO23- Seventeenth-Century Dutch Agriculture】

5. The word “consumption” in the passage is closest in meaning to (4)

○ sale

○ storage

○ exportation

○ utilization

Paragraph 5: The Dutch battle against the sea is legendary. Noorderkwartier in Holland, with its numerous lakes and stretches of water, was particularly suitable for land reclamation and one of the biggest projects undertaken there was the draining of the Beemster lake which began in 1608. The richest merchants in Amsterdam contributed money to reclaim a good 7,100 hectares of land. Forty-three windmills powered the drainage pumps so that they were able to lease the reclamation to farmers as early as 1612, with the investors receiving annual leasing payments at an interest rate of 17 percent. Land reclamation continued, and between 1590 and 1665, almost 100,000 hectares were reclaimed from the wetland areas of Holland, Zeeland, and Friesland. However, land reclamation decreased significantly after the middle of the seventeenth century because the price of agricultural products began to fall, making land reclamation far less profitable in the second part of the century. 【TPO23- Seventeenth-Century Dutch Agriculture】

10. The word “legendary” in the passage is closest in meaning to （3）

○ continuous

○ well documented

○ famous

○ expensive

Paragraph 6: Dutch agriculture was finally affected by the general agricultural crisis in Europe during the last two decades of the seventeenth century. However, what is astonishing about this is not that Dutch agriculture was affected by critical phenomena such as a decrease in sales and production, but the fact that the crisis appeared only relatively late in Dutch agriculture. In Europe as a whole, the exceptional reduction in the population and the related fall in demand for grain since the beginning of the seventeenth century had caused the price of agricultural products to fall. Dutch peasants were able to remain unaffected by this crisis for a long time because they had specialized in dairy farming industrial crops, and horticulture. However, toward the end of the seventeenth century, they too were overtaken by the general agricultural crisis. 【TPO23- Seventeenth-Century Dutch Agriculture】

11. The word “astonishing” in the passage is closest in meaning to (1)

○ incredible

○ unfortunate

○ predicted

○ evident

Paragraph 1: Ever since European first explored Australia, people have been trying to understand the ancient rock drawings and cavings created by the Aborigines, the original inhabitants of the continent. Early in the nineteenth century, encounters with Aboriginal rock art tended to be infrequent and open to speculative interpretation, but since the late nineteenth century, awareness of the extent and variety of Australian rock art has been growing. In the latter decades of the twentieth century there were intensified efforts to understand and record the abundance of Australian rock art. 【TPO23- Rock Art of the Australia Aborigines】

1. The word “infrequent” in the passage is closest in meaning to （2）

○ puzzling

○ uncommon

○ questionable

○ undocumented

Paragraph 2: The systematic study of this art is a relatively new discipline in Australia. Over the past four decades new discoveries have steadily added to the body of knowledge. The most significant data have come from a concentration on three major questions. First, what is the age of Australian rock art? Second, what is its stylistic organization and is it possible to discern a sequence or a pattern of development between styles? Third, is it possible to interpret accurately the subject matter of ancient rock art, bring to bear all available archaeological techniques and the knowledge of present-day Aboriginal informants? 【TPO23- Rock Art of the Australia Aborigines】

3. The word “relatively” in the passage is closest in meaning to (2)

○ completely

○ comparatively

○ apparently

○ particularly

4. The word “discern” in the passage is closest in meaning to （3）

○ indicate

○ apply

○ identify

○ repeat

Paragraph 3: The age of Australia’s rock art is constantly being revised, and earlier datings have been proposed as the result of new discoveries. Currently, reliable scientific evidence dates the earliest creation of art on rock surfaces in Australia to somewhere between 30,000 and 50,000 years ago. This in itself is an almost incomprehensible span of generations, and one that makes Australia’s rock art the oldest continuous art tradition in the world. 【TPO23- Rock Art of the Australia Aborigines】

5. The word “revised” in the passage is closest in meaning to （4）

○ discussed

○ raised

○ challenged

○ changed

**TPO-24**

paragraph2: The questions become more complicated when actual volumes of water are considered: how much water enters and leaves by each route? Discovering the inputs and outputs of rivers is a matter of measuring the discharges of every inflowing and outflowing stream and river. Then exchanges with the atmosphere are calculated by finding the difference between the gains from rain, as measured (rather roughly) by rain gauges, and the losses by evaporation, measured with models that correct for the other sources of water loss. For the majority of lakes, certainly those surrounded by forests, input from overland flow is too small to have a noticeable effect. Changes in lake level not explained by river flows plus exchanges with the atmosphere must be due to the net difference between what seeps into the lake from the groundwater and what leaks into the groundwater. Note the word "net": measuring the actual amounts of groundwater seepage into the lake and out of the lake is a much more complicated matter than merely inferring their difference. 【TPO24- Lake Water】

2.The word “gains” in the passage is closest in meaning to(2)

○results

○increases

○resources

○savings

paragraph3: Once all this information has been gathered, it becomes possible to judge whether a lake’s flow is mainly due to its surface inputs and outputs or to its underground inputs and outputs. If the former are greater, the lake is a surface-water-dominated lake; if the latter, it is a seepage-dominated lake. Occasionally, common sense tells you which of these two possibilities applies. For example, a pond in hilly country that maintains a steady water level all through a dry summer in spite of having no streams flowing into it must obviously be seepage dominated. Conversely, a pond with a stream flowing in one end and out the other, which dries up when the stream dries up, is clearly surface water dominated. 【TPO24- Lake Water】

5. The word “Conversely” meaning to(1)  
 ○on the other hand

○in the same way

○in other words

○on average

Paragraph 6: A given lake's residence time is by no means a fixed quantity. It depends on the rate at which water enters the lake, and that depends on the rainfall and the evaporation rate. Climatic change (the result of global warming?) is dramatically affecting the residence times of some lakes in northwestern Ontario. Canada. In the period 1970 to 1986, rainfall in the area decreased from 1,000 millimeters to 650 millimeters per annum, while above-average temperatures speeded up the evapotranspiration rate (the rate at which water is lost to the atmosphere through evaporation and the processes of plant life). The result has been that the residence time of one of the lakes increased from 5 to 18 years during the study period. The slowing down of water renewal leads to a chain of further consequences: it causes dissolved chemicals to become increasingly concentrated, and this, in turn, has a marked effect on all living things in the lake. 【TPO24- Lake Water】

10. The word “further ”in the passage is closest in meaning to（2）

○expected

○additional

○serious

○unfortunate

paragraph3: During NREM (the phase of sleep in which there is no rapid eye movement) breathing becomes deeper and more regular, but there is also a decrease in the breathing rate, resulting in less air being exchanged overall. This occurs because during NREM sleep the automatic, metabolic system has exclusive control over breathing and the body uses less oxygen and produces less carbon dioxide. Also, during sleep the automatic metabolic system is less responsive to carbon dioxide levels and oxygen levels in the blood. Two things result from these changes in breathing control that occur during sleep. First, there may be a brief cessation or reduction of breathing when falling asleep as the sleeper waxes and wanes between sleep and wakefulness and their differing control mechanisms. Second, once sleep is fully obtained, there is an increase of carbon dioxide and a decrease of oxygen in the blood that persists during NREM. 【TPO24- Breathing During Sleep】

3. The word “exclusive” in the passage is closest in meaning to（4）  
 ○consistent

○perfect

○partial

○sole

paragraph5: Other respiratory regulating mechanisms apparently cease functioning during sleep. For example, during wakefulness there is an immediate, automatic, adaptive increase in breathing effort when inhaling is made more difficult (such as breathing through a restrictive face mask). This reflexive adjustment is totally absent during NREM sleep. Only after several inadequate breaths under such conditions, resulting in the considerable elevation of carbon dioxide and reduction of oxygen in the blood, is breathing effort adjusted. Finally, the coughing reflex in reaction to irritants in the airway produces not a cough during sleep but a cessation of breathing. If the irritation is severe enough, a sleeping person will arouse, clear the airway, then resume breathing and likely return to sleep. 【TPO24- Breathing During Sleep】

9. The word “ considerable ”meaning to(1)

○significant

○Steady

○Usual

○necessary

10.The word “resume ”in the passage is closest in meaning to(4)

○

○reduce

○stop

○Readjust

○restart

paragraph1: In the Mesa Verde area of the ancient North American Southwest, living patterns changed in the thirteenth century, with large numbers of people moving into large communal dwellings called pueblos, often constructed at the edges of canyons, especially on the sides of cliffs. Abandoning small extended-family households to move into these large pueblos with dozens if not hundreds of other people was probably traumatic. Few of the cultural traditions and rules that today allow us to deal with dense populations existed for these people accustomed to household autonomy and the ability to move around the landscape almost at will. And besides the awkwardness of having to share walls with neighbors, living in aggregated pueblos introduced other problems. For people in cliff dwellings, hauling water, wood, and food to their homes was a major chore. The stress on local resources, especially in the firewood needed for daily cooking and warmth, was particularly intense, and conditions in aggregated pueblos were not very hygienic. 【TPO24- Moving into Pueblos】

1.The word traumatic meaning to(2)

○Essential

○highly stressful

○highly unusual

○unwise

2.The word intense in the passage is closest in meaning to(1)

○strong

○questionable

○obvious

○deliberate

paragraph4: Another important push was the onset of the Little Ice Age, a climatic phenomenon that led to cooler temperatures in the Northern Hemisphere. Although the height of the Little Ice Age was still around the corner, some evidence suggests that temperatures were falling during the thirteenth century. The environmental changes associated with this transition are not fully understood, but people living closest to the San Juan Mountains, to the northeast of Mesa Verde, were affected first. Growing food at these elevations is always difficult because of the short growing season. As the Little Ice Age progressed, farmers probably moved their fields to lower elevations, infringing on the lands of other farmers and pushing people together, thus contributing to the aggregations. Archaeologists identify a corresponding shift in populations toward the south and west toward Mesa Verde and away from higher elevations. 【TPO24- Moving into Pueblos】

1. The word transition in the passage is closest in meaning to (1)

○change

**○**climate

○decline

○problem

**TPO-25**

Paragraph 1: The surface of Mars shows a wide range of geologic features, including huge volcanoes-the largest known in the solar system-and extensive impact cratering. Three very large volcanoes are found on the Tharsis bulge, an enormous geologic area near Mars’s equator. Northwest of Tharsis is the largest volcano of all: Olympus Mons, with a height of 25 kilometers and measuring some 700 kilometers in diameter at its base. The three large volcanoes on the Tharsis bulge are a little smaller-a “mere” 18 kilometers high. 【TPO25- The surface of Mars】

1. The word “enormous” in the passage is closest in meaning to （B）

○ Important

○ Extremely large

○ Highly unusual

○ Active

Paragraph 2: None of these volcanoes was formed as a result of collisions between plates of the Martian crust-there is no plate motion on Mars. Instead, they are shield volcanoes-volcanoes with broad, sloping slides formed by molten rock. All four show distinctive lava channels and other flow features similar to those found on shield volcanoes on Earth. Images of the Martian surface reveal many hundreds of volcanoes. Most of the largest volcanoes are associated with the Tharsis bulge, but many smaller ones are found in the northern plains. 【TPO25- The surface of Mars】

3. The word “distinctive” in the passage is closest in meaning to （C）

○ Deep

○ Complex

○ Characteristic

○ Ancient

Paragraph 3: The great height of Martian volcanoes is a direct consequence of the planet’s low surface gravity. As lava flows and spreads to form a shield volcano, the volcano’s eventual height depends on the new mountain’s ability to support its own weight. The lower the gravity, the lesser the weight and the greater the height of the mountain. It is no accident that Maxwell Mons on Venus and the Hawaiian shield volcanoes on Earth rise to about the same height (about 10 kilometers) above their respective bases-Earth and Venus have similar surface gravity. Mars’s surface gravity is only 40 percent that of Earth, so volcanoes rise roughly 2.5 times as high. Are the Martian shield volcanoes still active? Scientists have no direct evidence for recent or ongoing eruptions, but if these volcanoes were active as recently as 100 million years ago (an estimate of the time of last eruption based on the extent of impact cratering on their slopes), some of them may still be at least intermittently active. Millions of years, though, may pass between eruptions. 【TPO25- The surface of Mars】

|  |
| --- |
| 5. The word “roughly” in the passage is closest in meaning to （D）  ○ Typically  ○ Frequently  ○ Actually  ○ Approximately |

Paragraph 4: Another prominent feature of Mars’s surface is cratering. The Mariner spacecraft found that the surface of Mars, as well as that of its two moons, is pitted with impact craters formed by meteoroids falling in from space. As on our Moon, the smaller craters are often filled with surface matter-mostly dust-confirming that Mars is a dry desert world. However, Martian craters get filled in considerably faster than their lunar counterparts. On the Moon, ancient craters less than 100 meters across (corresponding to depths of about 20 meters) have been obliterated, primarily by meteoritic erosion. On Mars, there are relatively few craters less than 5 kilometers in diameter. The Martian atmosphere is an efficient erosive agent, with Martian winds transporting dust from place to place and erasing surface features much faster than meteoritic impacts alone can obliterate them. 【TPO25- The surface of Mars】

8. The word “considerably” in the passage is closest in meaning to （B）

○ Frequently

○ Significantly

○ Clearly

○ Surprisingly

Paragraph 1: In the late thirteenth century, northern Italian cities such as Genoa, Florence, and Venice began an economic resurgence that made them into the most important economic centers of Europe. By the seventeenth century, however, other European powers had taken over, as the Italian cities lost much of their economic might. 【TPO25- The Decline of Venetian Shipping】

1. The word “resurgence” in the passage is closest in meaning to （B）

○ transformation

○ comeback

○ program

○ expansion

Paragraph 2 This decline can be seen clearly in the changes that affected Venetian shipping and trade. First, Venic’s intermediary functions in the Adriatic Sea, where it had dominated the business of shipping for other parties, were lost to direct trading. In the fifteenth century there was little problem recruiting sailors to row the galleys (large ships propelled by oars): guilds (business associations) were required to provide rowers, and through a draft system free citizens served compulsorily when called for. In the early sixteenth century the shortage of rowers was not serious because the demand for galleys was limited by a move to round ships (round-hulled ships with more cargo space), with required fewer rowers. But the shortage of crews proved to be a greater and greater problem, despite continuous appeal to Venic’s tradition of maritime greatness. Even though sailors’ wages doubled among the northern Italian cities from 1550 to 1590, this did not elicit an increased supply. 【TPO25- The Decline of Venetian Shipping】

2. The word “compulsorily” in the passage is closest in meaning to （C）

○ for free

○ for a time

○ by requirement

○ by design

Paragraph 3:The problem in shipping extended to the Arsenale, Venice’s huge and powerful shipyard. Timber ran short, and it was necessary to procure it from father and father away. In ancient Roman times, the Italian peninsula had great forest of fir preferred for warships, but scarcity was apparent as early as the early fourteenth century. Arsenale officers first brought timber from the foothills of the Alps, then from north toward Trieste, and finally from across the Adriatic**.** Private shipbuilders were required to buy their oak abroad. As the costs of shipbuilding rose, Venice clung to its outdated standard while the Dutch were innovation in the lighter and more easily handled ships. 【TPO25- The Decline of Venetian Shipping】

5. The word “outdated” in the passage is closest in meaning to (D)

○ strict

○ enforced

○ improved

○ old-fashioned

Paragraph 5:The conventional explanation for the loss of Venetian dominance in trade is establishment of the Portuguese direct sea route to the East, replacing the overland Silk Road from the Black sea and the highly profitable Indian Ocean-caravan-eastern Mediterranean route to Venice. The Portuguese Vasco da Gama’s Voyaga around southern Africa to India took place at the end of the fifteenth century, and by 1502 the trans- Abrabian caravan route had been cut off by political unrest. 【TPO25- The Decline of Venetian Shipping】

9. The word “conventional” in the passage is closest in meaning to (D)

○ informal

○ logical

○ correct

○ usual

Paragraph 1：The evolutionary history of plants has been marked by a series of adaptations. The ancestors of plants were photosynthetic single-celled organisms that gave rise to plants presumably lacked true roots, stems, leaves, and complex reproductive structures such as flowers. All of these features appeared later in the evolutionary history of plants. Of today’s different groups of algae, green algae are probably the most similar to ancestral plants. This supposition stems from the close phylogenetic (natural evolutionary) relationship between the two groups. DNA comparisons have shown that green algae are plants’ closest living relatives. In addition, other lines of evidence support the hypothesis that land plants evolved from ancestral green algae used the same type of chlorophyll and accessory pigments in photosynthesis as do land plants. This would not be true of red and brown algae. Green algae store food as starch, as do land plants and have cell walls made of cellulose, similar in composition to those of land plants. Again, the good storage and cell wall molecules of red and brown algae are different. 【TPO25- The Evolutionary Origin of Plants】

1. The word “presumably” in the passage is closest in （B）

meaning to

○ originally

○ supposedly

○ obviously

○ usually

|  |
| --- |
| Paragraph 2：Today green algae live mainly in freshwater, suggesting that their early evolutionary history may have occurred in freshwater habitats. If so, the green algae would have been subjected to environmental pressures that resulted in adaptations that enhanced their potential to give rise to land-dwelling or organisms. 【TPO25- The Evolutionary Origin of Plants】  3. The phrase “subjected to” in the passage is closest in （C）  ○ restricted by  ○ distant from |
| ○ exposed to  ○ combined with |

Paragraph 4:The terrestrial world is green now, but it did not start out that way. When plants first made the transition ashore more than 400 million years ago, the land was barren and desolate, inhospitable to life. From a plant’s evolutionary view point, however, it was also a land of opportunity, free of competitors and predators and full of carbon dioxide and sunlight (the raw materials for photosynthesis, which are present in far higher concentrations in air than in water).So once natural selection had shaped the adaptations that helped plants overcome the obstacles to terrestrial living, plants prospered and diversified. 【TPO25- The Evolutionary Origin of Plants】

5. The word “desolate”in the passage is closest in meaning to (C)

○ dusty

○ hardened

○ deserted

○ dried out

Paragraph 5:When plants pioneered the land, they faced a range of challenges posed by terrestrial environments. On land, the supportive buoyancy of water is missing, the plant is no longer bathed in a nutrient solution, and air tends to dry things out. These conditions favored the evolution of the structures that support the body, vessels that transport water and nutrients to all parts of plant, and structures that conserve water. The resulting adaptations to dry land include some structural features that arose early in plant evolution; now these features are common to virtually all land plant. They include roots or root like structures, a waxy cuticle that covers the surfaces of leaves and stems and limits the evaporation of water, and pores called stomata in leaves and stems that allow gas exchange but close when water is scarce, thus reducing water loss. Other adaptations occurred later in the transition to terrestrial life and now wide spread but not universal among plants. These include conducting vessels that transport water and minerals upward from the roots and that move the photosynthetic products from the leavesto the rest of the plant body and the stiffening substance lignin, which support the plant body, helping it expose maximum surface area to sunlight. 【TPO25- The Evolutionary Origin of Plants】

8. the word “posed” in the passage is closest in meaning to (B)

○ shared

○ presented

○ strengthened

○ concealed

**2013年度乐闻携尔课程信息**

**托福精英班**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **班号** | **班级名称** | **上课日期** | **学时** | **时间** | **费用** |
| **TB0024** | 托福精英（100+）班 | 2013/04/13-13/05/05  （4/27、28休息,  4/29、30上课） | 80小时 | 每周末  9:00-14:40，15:00-20:40 | 6800元每人 |
| **TB0025** | 托福精英（100+）班 | 2013/05/18-13/06/12  （6/08、09休息,  6/10、11上课） | 80小时 | 每周末  9:00-14:40，15:00-20:40 |
| **TB0026** | 托福精英（100+）班 | 2013/06/22-13/07/14 | 80小时 | 每周末  9:00-14:40，15:00-20:40 |
| **TB0027** | 托福精英（100+）  暑假班 | 2013/07/15-13/07/30 | 80小时 | 每天  9:00-11:30，12:10-14:40 |
| **TB0028** | 托福精英（100+）  暑假班 | 2013/08/05-13/08/20 | 80小时 | 每天  9:00-11:30，12:10-14:40 |
| **TB0029** | 托福精英（100+）班 | 2013/08/12-13/08/27 | 80小时 | 每天  9:00-11:30，12:10-14:40 |

**文勇托福阅读写作课程**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **班号** | **班级名称** | **上课日期** | **学时** | **时间** | **费用** |
| **WY1302** | 文勇托福阅读写作  （五一班） | 2013/04/29-13/05/01 | 22.5h | 9:00-11:30；  12:20-14:50；  15:00-17:30 | 680元 |
| **WY1303** | 文勇托福阅读写作 | 2013/07/15-13/07/19 | 22.5h | 9:00-11:30；  12:30-15:00 |
| **WY1304** | 文勇托福阅读写作 | 2013/08/05-13/08/09 | 22.5h | 9:00-11:30；  12:30-15:00 |

**托福集训营（1个月）**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **班号** | **班级名称** | **上课日期** | **学时** | **时间** | **费用** |
| **TG017** | 托福集训营（1个月） | 2013/04/22-2013/05/17 | 220h | 每天  09:00-21:00, | 13800元/人 |
| **TG018** | 托福集训营（1个月） | 2013/05/27-2013/06/22 | 220h | 每天  09:00-21:00, |
| **TG019** | 托福集训营（1个月） | 2013/06/24-2013/07/20 | 220h | 每天09:00-21:00, |

**托福集训营加强版（两个月班）**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **班号** | **班级名称** | **上课日期** | **学时** | **时间** | **费用** |
| **TE009** | 托福集训营加强版  （两个月班） | 2013/05/27-2013/07/20 | 440h | 每天  09:00-21:00, | 13800元/人 |

**SAT 精品模考班**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **班号** | **班级名称** | **上课日期** | **学时** | **时间** | **费用** |
| **SG04** | SAT 20天精品模考班 | 2013/04/04-2013/04/30  （4/6、10、14、15、19、23、27休息） | 80h模考  +80h讲解 | 每天  09:00-13:00  14:00-18:00 | 550元/人/天  10天班：  5000元/人  20天班：  9800元/人 |
| **SG04** | SAT 10天精品模考班 | 2013/04/18-2013/04/30（4/19、23、27休息） | 40h模考  +40h讲解 | 每天  09:00-13:00  14:00-18:00 |
| **SG05** | SAT 20天精品模考班 | 2013/05/02-2013/05/28  （5/5、9、13、14、18、22、26休息） | 80h模考  +80h讲解 | 每天  09:00-13:00  14:00-18:00 |
| **SG05** | SAT 10天精品模考班 | 2013/05/16-2013/05/28（5/18、22、26休息） | 40h模考  +40h讲解 | 每天  09:00-13:00  14:00-18:00 |

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