

# TPO 8

## READING

### Paragraph 1

1. The word “massive” in the passage is closest in meaning to
  - A. ancient
  - B. carefully
  - C. very large
  - D. carefully protected
  
2. In paragraph 1, each of the following is mentioned as a feature of the city of Teotihuacán between A.D. 150 and 700 EXCEPT
  - A. regularly arranged streets
  - B. several administrative centers spread across the city
  - C. many manufacturing workshops
  - D. apartment complexes

### Paragraph 2

3. The word “pinpoint” in the passage is closest in meaning to
  - A. identify precisely
  - B. make an argument for
  - C. describe
  - D. understand
  
4. The word “ingenuity” in the passage is closest in meaning to
  - A. ambition

### THE RISE OF TEOTIHUACAN

The city of Teotihuacán, which lay about 50 kilometers northeast of modern-Day Mexico City, began its growth by 200-100 B.C. At its height, between about A.D. 150 and 700, it probably had a population of more than 125,000 people and covered at least 20 square kilometers. It had over 2,000 apartment complexes, a great market, a large number of industrial workshops, an administrative center, a number of massive religious edifices, and a regular grid pattern of streets and buildings. Clearly, much planning and central control were involved in the expansion and ordering of his great metropolis. Moreover, the city had economic and perhaps religious contacts with most parts of Mesoamerica (modern Central America and Mexico).

How did this tremendous development take place, and why did it happen in the Teotihuacán Valley? Among the main factors are Teotihuacán’s geographic location on a natural trade route to the south and east of the Valley of Mexico, the obsidian resources in the Teotihuacán Valley itself, and the valley’s potential for extensive irrigation. The exact role of other factors is much more difficult to pinpoint—for

- B. sincerity
  - C. faith
  - D. cleverness
5. Which of the following is NOT mentioned in paragraph 2 as a main factor in The development of Teotihuacán?
- A. The presence of obsidian in the Teotihuacán Valley
  - B. The potential for extensive irrigation of Teotihuacán Valley lands
  - C. A long period of volcanic inactivity in the Teotihuacán Valley
  - D. Teotihuacán's location on a natural trade route

### **Paragraph 2**

### **Paragraph 3**

6. Which of the following can be inferred from paragraphs 2 and 3 about the Volcanic eruptions of the late first millennium B.C.?
- A. They were more frequent than historians once thought.
  - B. They may have done more damage to Teotihuacán than to neighboring centers.
  - C. They may have played a major role in the rise of Teotihuacán.
  - D. They increased the need for extensive irrigation in the Teotihuacán Valley
7. What can be inferred from paragraph 3 about Cuicuilco prior to 200 B.C.?
- A. It was a fairly small city until that date.
  - B. It was located outside the Valley of Mexico.
  - C. It emerged rapidly as an economical and political center.
  - D. Its economy relied heavily on agriculture.

instance, Teotihuacán's religious significance as a shrine, the historical situation in and around the Valley of Mexico toward the end of the first millennium B.C., the ingenuity and foresightedness of Teotihuacán's elite, and, finally, the impact of natural disasters, such as the volcanic eruptions of the late first millennium B.C.

This last factor is at least circumstantially implicated in Teotihuacán's rise. Prior to 200 B.C., a number of relatively small centers coexisted in and near the Valley of Mexico. Around this time, the largest of these centers, Cuicuilco, was seriously affected by a volcanic eruption, with much of its agricultural land covered by lava. With Cuicuilco eliminated as a potential rival, any one of a number of relatively modest towns might have emerged as a leading economic and political power in Central Mexico. The archaeological evidence clearly indicates, though, that Teotihuacan was the center that did arise as the predominant force in the area by the first century A.D.

8. The word “predominant” in the passage is closest in meaning to
- A. most aggressive
  - B. most productive
  - C. principal
  - D. earliest

#### **Paragraph 4**

9. Which of the following allowed Teotihuacán to have “a competitive edge over its neighbors”?
- A. A well-exploited and readily available commodity
  - B. The presence of a highly stable elite class
  - C. Knowledge derived directly from the Olmecs about the art of tool making
  - D. Scarce natural resources in nearby areas such as those located in what are now the Guatemalan and Mexican highlands
10. According to paragraph 4, what has recent research on obsidian tools found at Olmec sites shown?
- A. Obsidian’s value was understood only when Teotihuacán became an important city.
  - B. The residents of Teotihuacán were sophisticated toolmakers.
  - C. The residents of Teotihuacán traded obsidian with the Olmecs as early as 400 B.C.
  - D. Some of the obsidian used by the Olmecs came from the area around Teotihuacán.

#### **Paragraph 5**

11. Select the TWO answer choices that are mentioned in paragraph 5 as being

It seems likely that Teotihuacán’s natural resources—along with the city elite’s ability to recognize their potential—gave the city a competitive edge over its neighbors. The valley, like many other places in Mexican and Guatemalan highlands, was rich in obsidian. The hard volcanic stone was a resource that had been in great demand for many years, at least since the rise of the Olmecs (a people who flourished between 1200 and 400 B.C.), and it apparently had a secure market. Moreover, recent research on obsidian tools found at Olmecs sites has shown that some of the obsidian obtained by the Olmecs originated near Teotihuacán. Teotihuacán obsidian must have been recognized as a valuable commodity for many centuries before the great city arose.

Long-distance trade in obsidian probably gave the elite residents of

features of Teotihuacán that may have attracted immigrants to the city. To receive credit, you must select TWO answers.

- A. The prosperity of the elite
- B. Plenty of available housing
- C. Opportunities for well-paid agricultural employment
- D. The presence of one or more religious shrines

Teotihuacán access to a wide variety of exotic good, as well as a relatively prosperous life. Such success may have attracted immigrants to Teotihuacán. In addition, Teotihuacán's elite may have consciously attempted to attract new inhabitants. It is also probable that as early as 200 B.C. Teotihuacán may have achieved some religious significance and its shrine (or shrines) may have served as an additional population magnet. Finally, the growing population was probably fed by increasing the number and size of irrigated fields.

### Paragraph 6

12. In paragraph 6, the author discusses the “The thriving obsidian operation” in order to

- A. explain why manufacturing was the main industry of Teotihuacán
- B. give an example of an industry that took very little time to develop in Teotihuacán
- C. Illustrate how several factors influenced each other to make Teotihuacán a powerful and wealthy city
- D. explain how a successful industry can be a source of wealth and a source of conflict at the same time

The picture of Teotihuacán that emerges is a classic picture of positive feedback among obsidian mining and working, trade, population growth, irrigation, and religious tourism. The thriving obsidian operation, for example, would necessitate more miners, additional manufacturers of obsidian tools, and additional traders to carry the goods to new markets. All this led to increased wealth, which in turn would attract more immigrants to Teotihuacán. The growing power of the elite, who controlled the economy, would give them the means to physically coerce people to move to Teotihuacán and serve as additions to the labor force. More irrigation works would have to be built to feed the growing population, and this resulted in more power and wealth for the elite.

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

In fact, artifacts and pottery from Teotihuacán have been discovered in sites as far away as the Mayan lowlands, the Guatemalan highlands, northern Mexico, and the Gulf Coast of Mexico.

Where would the sentence best fit?

14. Teotihuacán was a highly developed city in Mesoamerica that reached its peak between about A.D. 150 and 700.

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Answer choices

- A. The number and sophistication of the architectural, administrative, commercial, and religious features of Teotihuacan indicate the existence of centralized planning and control.
- B. Teotihuacán may have developed its own specific local religion as a result of the cultural advances made possible by the city's great prosperity.
- C. As a result of its large number of religious shrines, by the first century A.D., Teotihuacan become the most influential.
- D. Several factors may account for Teotihuacán's extraordinary development, including its location, rich natural resources, irrigation potential, intelligent elite, and the misfortune of rival communities.
- E. In many important areas, from the obsidian industry to religious tourism,

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). ■

Teotihuacán's success and prosperity typified the classic positive feedback cycle.

F. Although many immigrants settled in Teotihuacán between A.D.150 and 700, the increasing threat of coerced labor discouraged further settlement and limited Teotihuacán's population growth.

#### **Paragraph 1**

1. According to paragraph 1, which of the following is true of the Late Cretaceous climate?
  - A. Summers were very warm and winters were very cold.
  - B. Shallow seas on the continents caused frequent temperature changes.
  - C. The climate was very similar to today's climate.
  - D. The climate did not change dramatically from season to season.

## **EXTINCTION OF THE DINOSAURS**

Paleontologists have argued for a long time that the demise of the dinosaurs was caused by climatic alterations associated with slow changes in the positions of continents and seas resulting from plate tectonics. Off and on throughout the Cretaceous (the last period of the Mesozoic era, during which dinosaurs flourished), large shallow seas covered extensive areas of the continents. Data from diverse sources, including geochemical evidence preserved in seafloor sediments, indicate that the Late Cretaceous climate was milder than today's. The days were not too hot, nor the nights too cold. The summers were not too warm, nor the winters too frigid. The shallow seas on the continents probably buffered the temperature of the nearby air, keeping it relatively constant.

#### **Paragraph 2**

2. Which of the following reasons is suggested in paragraph 2 for the extinction

At the end of the Cretaceous, the geological record shows that these seaways retreated from the

of the dinosaurs?

- A. Changes in the lengths of the days and nights during the late Cretaceous period
- B. Droughts caused by the movement of seaways back into the oceans
- C. The change from mild to severe climates during the Late Cretaceous period
- D. An extreme decrease in the average yearly temperature over 10,000 years

### Paragraph 3

3. Why does the author mention the survival of “snakes, lizards, turtles, and crocodiles” in paragraph 3?
- A. To argue that dinosaurs may have become extinct because they were not cold-blooded animals
  - B. To question the adequacy of the hypothesis that climatic change related to sea levels caused the extinction of the dinosaurs
  - C. To present examples of animals that could maintain a livable body temperature more easily than dinosaurs
  - D. To support a hypothesis that these animals were not as sensitive to climate changes in the Cretaceous period as they are today
4. The word “cope” in the passage is closest in meaning to
- A. adapt
  - B. move
  - C. continue
  - D. compete
5. According to paragraph 3, which of the following is true of changes in climate

continents back into the major ocean basins. No one knows why. Over a period of about 100,000 years, while the seas pulled back, climates around the world became dramatically more extreme: warmer days, cooler nights; hotter summers, colder winters.

Perhaps dinosaurs could not tolerate these extreme temperature changes and became extinct.

If true, though, why did cold-blooded animals such as snakes, lizards, turtles, and crocodiles survive the freezing winters and torrid summers? These animals are at the mercy of the climate to maintain a livable body temperature. It's hard to understand why they would not be affected, whereas dinosaurs were left too crippled to cope, especially if, as some scientists believe, dinosaurs were warm-blooded. Critics also point out that the shallow seaways had retreated from and advanced on the continents numerous times during the Mesozoic, so why did the dinosaurs survive the climatic changes associated with the earlier fluctuations but not with this one? Although initially appealing, the hypothesis of a simple climatic change related to sea levels is insufficient to explain all the data.

before the Cretaceous period and the effect of these changes on dinosaurs?

- A. Climate changes associated with the movement of seaways before the Cretaceous period did not cause dinosaurs to become extinct.
- B. Changes in climate before the Cretaceous period caused severe fluctuations in sea level, resulting in the extinction of the dinosaurs.
- C. Frequent changes in climate before the Cretaceous period made dinosaurs better able to maintain a livable body temperature.
- D. Before the Cretaceous period there were few changes in climate, and dinosaurs flourished.

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

- A. extremes
- B. retreats
- C. periods
- D. variations

#### Paragraph 4

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

- A. The fossil record suggests that there was an abrupt extinction of many plants and animals at the end of the Mesozoic era.
- B. Few fossils of the Mesozoic era have survived in the rocks that mark the end of the Cretaceous.
- C. Fossils from the Cretaceous period of the Mesozoic up to the beginning of the

Dissatisfaction with conventional explanations for dinosaur extinctions led to a surprising observation that, in turn, has suggested a new hypothesis.  
Many plants and animals disappear abruptly from the fossil record as one moves from layers of rock documenting the end of the Cretaceous up into rocks representing the beginning of the Cenozoic (the era after the Mesozoic). Between the last layer of Cretaceous rock and the first layer of Cenozoic rock, there is often a thin

Cenozoic era have been removed from the layers of rock that surrounded them.

D. Plants and animals from the Mesozoic era were unable to survive in the Cenozoic era.

8. In paragraph 4, all the following questions are answered EXCEPT:

- A. Why is there a layer of clay between the rocks of the Cretaceous and Cenozoic?
- B. Why were scientists interested in determining how long it took to deposit the layer of clay at the end of the Cretaceous?
- C. What was the effect of the surprising observation scientists made?
- D. Why did scientists want more information about the dinosaur extinctions at the end of the Cretaceous?

### Paragraph 5

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

- A. approach
- B. strike
- C. pass
- D. circle

10. Paragraph 5 implies that a special explanation of Ir in the boundary clay is needed because

- A. the Ir in microscopic meteorites reaching Earth during the Cretaceous period would have been incorporated into Earth's core
- B. the Ir in the boundary clay was deposited much more than a million years ago
- C. the concentration of Ir in the boundary clay is higher than in microscopic

layer of clay. Scientists felt that they could get an idea of how long the extinctions took by determining how long it took to deposit this one centimeter of clay and they thought they could determine the time it took to deposit the clay by determining the amount of the element iridium (Ir) it contained.

It has not been common at Earth's since the very beginning of the planet's history. Because it usually exists in a metallic state, it was preferentially incorporated in Earth's core as the planet cooled and consolidated. 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

meteorites

- D. the amount of Ir in the boundary clay is too great to have come from microscopic meteorites during the time the boundary clay was deposited

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. ■

### Paragraph 6

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

- A. exhaustion
- B. disturbance
- C. modification
- D. disappearance

12. Paragraph 6 mentions all of the following effects of the hypothesized asteroid collision EXCEPT

- A. a large dust cloud that blocked sunlight
- B. an immediate drop in the surface temperatures of the continents
- C. an extreme decrease in rainfall on the continents
- D. a long-term increase in global temperatures

In view of these facts, scientists hypothesized that a single large asteroid, about 10 to 15 kilometers across, collided with Earth, and the resulting fallout created the boundary clay. Their calculations show that the impact kicked up a dust cloud that cut off sunlight for several months, inhibiting photosynthesis in plants; decreased surface temperatures on continents to below freezing; caused extreme episodes of acid rain; and significantly raised long-term global temperatures through the greenhouse effect. This disruption of food chain and climate would have eradicated the dinosaurs and other organisms in less than fifty years.

### Paragraph 5

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

Consequently, the idea that the Ir in the boundary clay came from microscopic meteorites cannot be accepted.

Where would the sentence best fit?

■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

14. For a long time scientists have argued that the extinction of The dinosaurs was related to climate change.

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Answer choices

- A. A simple climate change does not explain some important data related to the extinction of the dinosaurs at the end of the Cretaceous.
- B. The retreat of the seaways at the end of the Cretaceous has not been fully explained.
- C. The abruptness of extinctions at the end of the Cretaceous and the high concentration of Ir found in clay deposited at that time have fueled the development of a new hypothesis.
- D. Extreme changes in daily and seasonal climates preceded the retreat of the seas back into the major ocean basins.
- E. Some scientists hypothesize that the extinction of the dinosaurs resulted from the effects of an asteroid collision with Earth.
- F. Boundary clay layers like the one between the Mesozoic and Cenozoic are used by scientists to determine the rate at which an extinct species declined.

require a special explanation. ■

## RUNNING WATER ON MARS

### Paragraph 1

1. The word “merge” in the passage is closest in meaning to
  - A. expand
  - B. separate
  - C. straighten out
  - D. combine
  
2. What does the discussion in paragraph 1 of runoff channels in the southern highlands suggest about Mars?
  - A. The atmosphere of Mars was once thinner than it is today.
  - B. Large amounts of rain once fell on parts of Mars.
  - C. The river systems of Mars were once more extensive than Earth’s.
  - D. The rivers of Mars began to dry up about 4 billion years ago.

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.

### Paragraph 2

3. The word “relics” in the passage is closest in meaning to
  - A. remains
  - B. sites
  - C. requirements
  - D. sources
  
4. The word “miniature” in the passage is closest in meaning to
  - A. temporary
  - B. small

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”

- C. multiple
- D. familiar

5. In paragraph 2, why does the author include the information that 105 tons of water flow through the Amazon river per second?

- A. To emphasize the great size of the volume of water that seems to have flowed through Mars' outflow channels
- B. To indicate data used by scientists to estimate how long ago Mars' outflow channels were formed
- C. To argue that flash floods on Mars may have been powerful enough to cause tear-shaped "islands" to form
- D. To argue that the force of flood waters on Mars was powerful enough to shape the northern volcanic plains

6. According to paragraph 2, all of the following are true of the outflow channels on Mars EXCEPT:

- A. They formed at around the same time that volcanic activity was occurring on the northern plains.
- B. They are found only on certain parts of the Martian surface.
- C. They sometimes empty onto what appear to have once been the wet sands of tidal beaches.
- D. They are thought to have carried water northward from the equatorial regions.

### Paragraph 3

7. All of the following questions about geological features on Mars are answered in paragraph 3 EXCEPT:

- A. What are some regions of Mars that

(resembling the miniature versions seen in the wet sand of our beaches at low tide) that have been found on the plains close to the ends of the outflow channels. ■Judging from the width and depth of the channels, the flow rates must have been truly enormous—perhaps as much as a hundred times greater than the 105 tons per second carried by the great Amazon river. Flooding shaped the outflow channels approximately 3 billion years ago, about the same times as the northern volcanic plains formed.

Some scientists speculate that Mars may have enjoyed an extended early Period during which rivers, lakes, and perhaps even oceans adorned its surface. A 2003 Mars Global Surveyor image shows what

- may have once been covered with an ocean?
- B. Where do mission scientists believe that the river forming the delta emptied?
- C. Approximately how many craters on Mars do mission scientists believe may once have been lakes filled with water?
- D. During what period of Mars' history do some scientists think it may have had large bodies of water?
8. According to paragraph 3, images of Mars' surface have been interpreted as support for the idea that
- A. the polar regions of Mars were once more extensive than they are now
- B. a large part of the northern lowlands may once have been under water
- C. deltas were once a common feature of the Martian landscape
- D. the shape of the Hellas Basin has changed considerably over time

#### Paragraph 4

9. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.
- A. But detractors argue that geological activity may be responsible for the water associated with the terraces.
- B. But detractors argue that the terraces may have been formed by geological activity rather than by the presence of water.
- C. But detractors argue that the terraces may be related to geological forces in the Northern Hemisphere of Mars, rather than

mission specialists think may be a delta—a fan-shaped network of channels and sediments where a river once flowed into a larger body of water, in this case a lake filling a crater in the southern highlands. Other researchers go even further, suggesting that the data provide evidence for large open expanses of water on the early Martian surface. A computer-generated view of the Martian north polar region shows the extent of what may have been an ancient ocean covering much of the northern lowlands. The Hellas Basin, which measures some 3,000 kilometers across and has a floor that lies nearly 9 kilometers below the basin's rim, is another candidate for an ancient Martian sea.

These ideas remain controversial. Proponents point to features such as the terraced “beaches” shown in one image, which could conceivably have been left behind as a lake or ocean evaporated and the shoreline receded. But detractors maintain that the terraces could also have been created by geological activity, perhaps related to the geologic forces that depressed the Northern Hemisphere far below the level of the south, in which case they have nothing whatever to do with Martian water. Furthermore, Mars Global Surveyor data released in 2003 seem to indicate that the Martian surface contains too few

to Martian water in the south.

D. But detractors argue that geological forces depressed the Northern Hemisphere so far below the level of the south that the terraces could not have been formed by water.

10. According to paragraph 4, what do the 2003 Global Surveyor data suggest about Mars?

- A. Ancient oceans on Mars contained only small amounts of carbon.
- B. The climate of Mars may not have been suitable for the formation of large bodies of water.
- C. Liquid water may have existed on some parts of Mars' surface for long periods of time.
- D. The ancient oceans that formed on Mars dried up during periods of cold, dry weather.

### **Paragraph 5**

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

- A. clues
- B. features
- C. arguments
- D. effects

carbonate rock layers—layers containing compounds of carbon and oxygen—that should have been formed in abundance in an ancient ocean. Their absence supports the picture of a cold, dry Mars that never experienced the extended mild period required to form lakes and oceans. However, more recent data imply that at least some parts of the planet did in fact experience long periods in the past during which liquid water existed on the surface.

Aside from some small-scale gullies (channels) found since 2000, which are inconclusive, astronomers have no direct evidence for liquid water anywhere on the surface of Mars today, and the amount of water vapor in the Martian atmosphere is tiny. Yet even setting aside the unproven hints of ancient oceans, the extent of the past. Where did all the water go? The answer may be that virtually all the water on Mars is now locked in the permafrost layer under the surface, with more contained in the planet’s polar caps.

## Paragraph 2

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

These landscape features differ from runoff channels in a number of ways.

Where would the sentence best fit?

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

There is much debate concerning whether Mars once had water.

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Answer choices

- A. Mars' runoff and outflow channels are large-scale, distinctive features that suggest that large quantities of liquid water once flowed on Mars.
- B. Although some researchers claim that Mars may once have had oceans, others dispute this, pointing to an absence of evidence or offering alternative interpretations of evidence.
- C. Various types of images have been used to demonstrate that most of Martian surface contains evidence of flowing water.
- D. The runoff and outflow channels of Mars apparently carried a higher volume

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.

of water and formed more extensive networks than do Earth's river systems.

E. There is very little evidence of liquid water on Mars today, and it is assumed that all the water that once existed on the planet is frozen beneath its surface.

F. While numerous gullies have been discovered on Mars since 2000, many astronomers dismiss them as evidence that Mars once had liquid water.





## **LISTENING**

1. Why does the man go to see the registrar?
  - A. To find out why he is not on the list of graduating students
  - B. To explain why he has not fulfilled his graduation requirements
  - C. To find out the exact requirements for graduation
  - D. To submit a document required for graduation
  
2. According to the registrar, what step is currently taken to ensure that students fulfill their graduation requirements?
  - A. Academic records are regularly checked by the registrar's office
  - B. Students meet with a department chairperson to plan their course work
  - C. Students receive letters listing the courses that they still need to take
  - D. Warning letters are sent to students who have fallen behind in their course work
  
3. Why does the man mention his classmates?
  - A. To explain how he obtained information about field research
  - B. To point out that many students like to do field research
  - C. To show that it is difficult to get intermediate-level credits
  - D. To emphasize his motivation to do filed research in two of his courses
  
4. Why does the registrar tell the man to contact his chairperson immediately?
  - A. A deadline has already passed
  - B. The man has a limited time to resolve his problem
  - C. The man first needs to find out if the chairperson will help him
  - D. Issuing a new grade may take longer than expected
  
5. Listening again to part of the conversation. Then answer the question. Why does the registrar imply when she says this:
  - A. She is uncertain about the reliability of the computer
  - B. She will approve the man's form despite her doubts about it
  - C. She needs more information about the man's credits
  - D. She needs to call someone to help her fix computer errors

6. What is the main purpose of the lecture?

- A. To compare active habitat selection with passive habitat selection
- B. To show that most habitat preferences in animals are learned
- C. To compare the habitat requirements of several bird species
- D. To examine the consequences of habitat selection by animals

7. What element of the lover's habitat in California was threatened?

- A. The availability of food
- B. The availability of water
- C. The safety of nests from human activity
- D. The protection of nests from predatory birds

8. What does the professor illustrate with the example of the blue warbler?

- A. The relationship between human activity and habitat loss
- B. The relationship between habitat and reproductive success
- C. The advantages of habitats with low vegetation density
- D. The reproductive advantage that young warblers have over older warblers

9. Why does the professor mention the population density of blackcaps in two different habitats?

- A. To explain the similar reproductive rates in the two habitats
- B. To explain the relation between a species' population density and its nesting behavior
- C. To illustrate the advantages of a preferred habitat over a secondary habitat
- D. To illustrate the possible impact of making a poor habitat selection

10. According to the professor, why did some blackcaps choose a secondary habitat?

- A. They were following a moving food supply
- B. Their preferred habitat was taken over by another bird species
- C. Their nesting sites were disturbed by human activity
- D. Their preferred habitat became too competitive

11. Listening again to part of the conversation. Then answer the question. What can be inferred about the professor when she says this

- A. She realizes that she just contradicted a statement she made earlier
- B. She is about to discuss another aspect of the topic
- C. She thinks the answer to her question is obvious

D. She wants students to recall a case that she has already discussed.

12. What is the lecture mainly about?

- A. Why the Salon exhibitions became popular among women artists in Paris
- B. Why French society did not approve of art schools or women
- C. How opportunities for women artists in Paris improved
- D. How women artists in Paris cooperated with one another

13. What point does the professor make about Julian when he mentions that Julian's art school offered some classes only for women?

- A. Julian's school was the first art school in Paris to offer women-only classes
- B. Julian wanted to encourage the distinctive style of women in Paris
- C. Julian viewed himself as a social reformer
- D. Julian possessed outstanding business skills

14. What does the professor emphasize as one benefit of competition in women's classes?

- A. Women gained more confidence in their artistic abilities
- B. Women became instructors in private art studios
- C. Women were able to sell their paintings for large amounts of money
- D. Women created new styles of painting

15. According to the professor, what were two ways that the situation of women artists had changed by the end of the nineteenth century in Paris? Click on 2 answers.

- A. Women and men took art classes together
- B. Women artists played a greater role in the Salon exhibitions
- C. More schools were established by women artists
- D. Fewer women artists were traveling to Paris

16. What does the professor imply about Bashkirtseff's painting In the Studio?

- A. It was one of many paintings that depicted a women's studio
- B. It did not bring Bashkirtseff recognition for her artistic ability
- C. It was criticized for an unrealistic depiction of women artists
- D. It was beneficial for both Bashkirtseff and the school where she studied

17. Listening again to part of the conversation. Then answer the question. What does the professor mean when he says this

- A. Paris was a popular place to visit, but not the best place to study art
- B. Paris was the most important place for an artist to study and work
- C. Living in Paris was difficult for women artists from other countries
- D. Studying in Paris was beneficial for some artists, but not for others.

18. What is the conversation mainly about?

- A. Preparing for a test
- B. A strategy for attracting customers
- C. Business opportunities in the field of health
- D. Differences between two business models

19. What does the professor imply about the upcoming test?

- A. It will not contain questions about the health-club model
- B. It will ask about ways to improve the customer's self-image
- C. It will require students to discuss marketing strategies for libraries
- D. It will not require students to give examples of successful businesses

20. Based on the conversation, indicate whether each of the following is offered by health clubs.

Click in the correct boxes. This question is worth two points.

Yes

No

- A. Low membership fees
- B. High-quality facilities
- C. Exercise classes
- D. Positive self-image
- E. Special presentations

21. What does the professor imply about public libraries?

- A. They tend to be more popular than health clubs
- B. They cannot offer as many services as health clubs
- C. They should not spend money on high-quality equipment
- D. They need to give greater emphasis to strategic marketing

22. Listening again to part of the conversation. Then answer the question. Why does the student say this

- A. To introduce a personal story about exercising
- B. To point out a flaw in the health-club model
- C. To give an example that supports the professor's point
- D. To explain why he disagrees with the professor

23. What is the lecture mainly about?

- A. Political events that led to the invention of eyeglasses
- B. A comparison of attitudes toward vision correction in Europe and China
- C. The relationship between the printing press and literacy
- D. An overview of vision correction over time

24. According to the professor, what was an advantage of using clear glass instead of quartz to make reading stones?

- A. Clear glass was easier to find than quartz
- B. Clear glass was easier to cut to the appropriate size
- C. Clear glass magnified the letters more than quartz did
- D. Clear glass was less expensive than quartz

25. What does the professor imply about the invention of eyeglasses?

- A. Its historical records are more detailed than those of other inventions
- B. It has little impact on social attitudes toward vision correction
- C. Its occurrence in different places at approximately the same time is out unusual
- D. It contributed to a substantial increase in the number of literate people.

26. Which sentence best describes eyeglasses before the invention of the printing press?

- A. They were available to everyone
- B. They were a symbol of wealth and wisdom
- C. They could not correct vision accurately
- D. They could be bought only from traveling peddlers

27. Put the events in the order that they happened Click on a sentence. Then drag it to the space where it belongs

- A. Inexpensive eyeglasses became available

- B. The first eyeglasses were made  
C. The number of people interested in reading increased  
D. The printing press was invented
28. Listening again to part of the conversation. Then answer the question. What does the professor imply when she says this  
A. She is impressed by the solution  
B. The solution she describe is obvious  
C. The solution was not a common practice  
D. The solution was not particularly expensive
29. In the beginning of the lecture a student asks a question about the periodic table. How does the story of element 43 answer her question?  
A. By providing an example of an element whose place in the periodic table was moved  
B. By providing an example of an element whose existence was predictable from the periodic table  
C. By providing an example of an element which scientists predicted was formed from uranium  
D. By providing an example of an element that can only be made artificially
30. What does the professor say about early versions of the periodic table?  
A. Early versions listed two names for some elements  
B. Early versions had the incorrect atomic number for some elements  
C. Early versions were not as easy to use as modern version  
D. Early versions did not list an element for every atomic number
31. What fact inspired researchers to give the name “technetium” to element 43?  
A. The element was radioactive  
B. The element was derived from uranium  
C. The element was created artificially  
D. The element was found using x-ray spectroscopy.
32. What characteristic of element 43 might explain why the scientific community doubted the findings of Ida Tacke’s team?  
A. Element 43 has a very fast rate of decay  
B. Element 43 always contains small amount of other elements  
C. Element 43 cannot be created artificially

D. Element 43's radioactivity makes it easy to isolate and measure

33. What does the professor believe about the claim that Ida Tacke's team made about element 43?

- A. Scientists should have accepted the claim when it was first published
- B. There is not enough evidence to know if the team actually discovered element 43
- C. The team's unusual scientific methods were unreliable
- D. If the team's ore sample had contained element 43, the team would have been able to isolate a weighable amount

34. Listening again to part of the conversation. Then answer the question What does the professor imply about the chemist Ida Tacke when he says this

- A. She did not realize that the periodic table predicted the radioactivity of element 43
- B. She did not understand why her team's findings were dismissed by the scientific community
- C. Her theory about uranium would have explained the presence of element 43 in her team's ore sample
- D. Her theory about uranium would have explained the errors that created element 43 in a cyclotron

## SPEAKING

1.Talk about a time when a friend or family member helped you in the past. Describe how the person helped you. Then explain why this was important to you. 【事件】

2.Some people enjoy taking risks and trying new things. Others are not adventurous: they are cautious and prefer to avoid danger. Which behavior do you think is better? Explain why. 【prefer】

3.Music Coming to Cafeterias

Mary Dixon, Director of the Student Life Committee, announced yesterday that beginning next semester university cafeterias will broadcast classical music during mealtimes. "Music will foster a more relaxed atmosphere." Said Dixon, "Students' lives are hectic, and mealtimes provide important opportunities to take a break and catch up with friends before moving on to the next class or assignment." Added Dixon. "We're also hoping that, if we provide the music, students will unplug their personal music devices---their walkmans and mp3 players of whatever---and will spend more time talking to each other. When students have their headphones on, they're not connecting with each other."

The man expresses his opinion about his opinion of the university's plan. State his opinion and explain the reasons he gives for holding that opinion.

4.Revealing Coloration

Many animals use coloration to protect themselves from predators. One defensive strategy involving the use of coloration is what is known as revealing coloration. Animals employing this strategy have an area of bright color on some part of their body; this bright color is usually hidden from predators' view. When approached by a predator, the animal suddenly reveals the area of bright color; this unexpected display of color startles or confuses the predator and provides the would-be prey with an opportunity to escape.

Using the examples from the peanut bug and the morpho butterfly, explain the concept of revealing coloration.

5.Briefly summarize the problem the speakers are discussing. Then state which solution you would recommend and explain the reasons for your recommendation.

6.Using points and examples from the lecture, explain the two pricing strategies described by the professor.



## **WRITING**

### **TASK 1**

Toward the end of his life, the Chevalier de Seingalt (1725-1798) wrote a long memoir recounting his life and adventures. The Chevalier was a somewhat controversial figure, but since he met many famous people, including kings and writers, his memoir has become a valuable historical source about European society in the eighteenth century. However, some critics have raised doubts about the accuracy of the memoir. They claim that the Chevalier distorted or invented many events in the memoir to make his life seem more exciting and glamorous than it really was.

For example, in his memoir the Chevalier claims that while living in Switzerland, he was very wealthy, and it is known that he spent a great deal of money there on parties and gambling. However, evidence has recently surfaced that the Chevalier borrowed considerable sums of money from a Swiss merchant. Critics thus argue that if the Chevalier had really been very rich, he would not have needed to borrow money.

Critics are also skeptical about the accuracy of the conversations that the Chevalier records in the memoir between himself and the famous writer Voltaire. No one doubts that the Chevalier and Voltaire met and conversed. However, critics complain that the memoir cannot possibly capture these conversations accurately, because it was written many years after the conversations occurred. Critics point out that it is impossible to remember exact phrases from extended conversations held many years earlier.

Critics have also questioned the memoir's account of the Chevalier's escape from a notorious prison in Venice, Italy. He claims to have escaped the Venetian prison by using a piece of metal to make a hole in the ceiling and climbing through the roof. Critics claim that while such a daring escape makes for enjoyable reading, it is more likely that the Chevalier's jailers were bribed to free him. They point out that the Chevalier had a number of politically well-connected friends in Venice who could have offered a bribe.

**Summarize the points made in the lecture, being sure to explain how they support/contradict specific points made in the reading passage.**

### **TASK 2**

Television advertising directed towards young children (aged two to five) should not be allowed.

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