

TOEFL READING PRACTICE PAPER 14

Reading Practice Set 1

Directions: Read the passage. Give yourself 20 minutes to complete this practice set.
The Geologic History of the Mediterranean

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?

2 Another task for the *Glomar Challenger*'s scientists was to try to determine the origin of the dome-like masses buried deep beneath the Mediterranean seafloor. These structures had been detected years earlier by echo-sounding instruments, but they had never been penetrated in the course of drilling. Were they salt domes such as are common along the United States Gulf Coast, and if so, why should there have been so much solid crystalline salt beneath the floor of the Mediterranean?

3 With questions such as these clearly before them, the scientists aboard the *Glomar Challenger* proceeded to the Mediterranean to search for the answers. On August 23, 1970, they recovered a sample. The sample consisted of pebbles of hardened sediment that had once been soft, deep-sea mud, as well as granules of gypsum¹ and fragments of volcanic rock. Not a single pebble was found that might have indicated that the pebbles came from the nearby continent. In the days following, samples of solid gypsum were repeatedly brought on deck as drilling operations penetrated the seafloor. Furthermore, the gypsum was found to possess peculiarities of composition and structure that suggested it had formed on desert flats. Sediment above and below the gypsum layer contained tiny marine fossils, indicating open ocean conditions. As they drilled into the central and deepest part of the Mediterranean basin, the scientists took solid, shiny, crystalline salt from the core barrel. Interbedded with the salt were thin layers of what appeared to be windblown silt.

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 layers of oceanic ooze began to accumulate above the old hard layer.

5 The salt and gypsum, the faunal changes, and the unusual gravel provided abundant evidence that the Mediterranean was once a desert. 1gypsum: a mineral made of calcium sulfate and water

Directions: Answer the questions.

1. Which of the following is NOT mentioned in paragraph 1 as a change that occurred in the fauna of the Mediterranean?

- A Most invertebrate species disappeared during a wave of extinctions.
- B A few hardy species wiped out many of the Mediterranean's invertebrates.
- C Some invertebrates migrated to the Atlantic Ocean.
- D New species of fauna populated the Mediterranean when the old migrants returned.

2. What does the author imply by saying "Not a single pebble was found that might have indicated that the pebbles came from the nearby continent"?

- A The most obvious explanation for the origin of the pebbles was not supported by the evidence.
- B The geologists did not find as many pebbles as they expected.
- C The geologists were looking for a particular kind of pebble.
- D The different pebbles could not have come from only one source.

3. Select the TWO answer choices from paragraph 3 that identify materials discovered in the deepest part of the Mediterranean basin. To receive credit, you must select TWO answers.

- A Volcanic rock fragments
- B Thin silt layers
- C Soft, deep-sea mud
- D Crystalline salt

4. What is the main purpose of paragraph 3 ?

- A To describe the physical evidence collected by Hsu and Ryan
- B To explain why some of the questions posed earlier in the passage could not be answered by the findings of the Glomar Challenger
- C To evaluate techniques used by Hsu and Ryan to explore the seafloor

D To describe the most difficult problems faced by the Glomar Challenger expedition

5. According to paragraph 4, which of the following was responsible for the evaporation of the Mediterranean's waters?

- A The movements of Earth's crust
- B The accumulation of sediment layers
- C Changes in the water level of the Atlantic Ocean
- D Changes in Earth's temperature

6. The word "**scores**" in the passage is closest in meaning to

- A members
- B large numbers
- C populations
- D different types

7. According to paragraph 4, what caused most invertebrate species in the Mediterranean to become extinct?

- A The evaporation of chemicals necessary for their survival
- B Crustal movements that connected the Mediterranean to the saltier Atlantic
- C The migration of new species through the narrow straits
- D Their inability to tolerate the increasing salt content of the Mediterranean

8. Which of the sentences below best expresses the essential information in the highlighted sentence in paragraph 4? Incorrect choices change the meaning in important ways or leave out essential information.

- A The Strait of Gibraltar reopened when the Mediterranean and the Atlantic became connected and the cascades of water from one sea to the other caused crustal adjustments and faulting.
- B The Mediterranean was dramatically refilled by water from the Atlantic when crustal adjustments and faulting opened the Strait of Gibraltar, the place where the two seas are joined.
- C The cascades of water from the Atlantic to the Mediterranean were not as spectacular as the crustal adjustments and faulting that occurred when the Strait of Gibraltar was connected to those seas.
- D As a result of crustal adjustments and faulting and the creation of the Strait of Gibraltar, the Atlantic and Mediterranean were connected and became a single sea with spectacular cascades of water between them.

9. In paragraph 2 of the passage, there is a missing sentence. The paragraph is repeated below and shows four letters (A, B, C, and D) that indicate where the following sentence could be added. Thus, scientists had information about the shape of the domes but not about their chemical composition and origin. Where would the sentence best fit? (A) Another task for the Glomar Challenger's scientists was to try to determine the origin of the domelike masses buried deep beneath the Mediterranean seafloor. (B) These structures had been detected years earlier

by echo-sounding instruments, but they had never been penetrated in the course of drilling. (C) Were they salt domes such as are common along the United States Gulf Coast, and if so, why should there have been so much solid crystalline salt beneath the floor of the Mediterranean?

(D)

A Option A

B Option B

C Option C

D Option D

10. 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. Write your answer choices in the spaces where they belong. You can either write the letter of your answer choice or you can copy the sentence.

An expedition to the Mediterranean answered some long-standing questions about the ocean's history.
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Answer Choices

A The Glomar Challenger expedition investigated changes in invertebrate fauna and some unusual geologic features. B Researchers collected fossils to determine which new species migrated from the Atlantic with older species.

C Scientists aboard the Glomar Challenger were the first to discover the existence of dome-like masses underneath the seafloor.

D Samples recovered from the expedition revealed important differences in chemical composition and fossil distribution among the sediment layers.

E Evidence collected by the Glomar Challenger supports geologists' beliefs that the Mediterranean had evaporated and become a desert, before it refilled with water.

F Mediterranean salt domes formed after crustal movements opened the straits between the Mediterranean and the Atlantic, and the Mediterranean refilled with water.

Lascaux Cave Paintings

In Southwest France in the 1940's, playing children discovered Lascaux Grotto, a series of narrow cave chambers that contain huge prehistoric paintings of animals. Many of these beasts are as large as 16 feet (almost 5 meters). Some follow each other in solemn parades, but others swirl about, sideways and upside down. The animals are bulls, wild horses, reindeer, bison, and mammoths outlined with charcoal and painted mostly in reds, yellow, and browns. Scientific analysis reveals that the colors were derived from ocher and other iron oxides ground into a fine powder. Methods of applying color varied: some colors were brushed or smeared on rock surfaces and others were blown or sprayed. It is possible that tubes made from animal bones were used for spraying because hollow bones, some stained with pigment, have been found nearby.

➡ One of the most puzzling aspects of the paintings is their location. Other rock paintings—for example, those of Bushmen in South Africa—are either located near cave entrances or completely in the open.

■ Cave paintings in France and Spain, however, are in recesses and caverns far removed from original cave entrances. ■ This means that artists were forced to work in cramped spaces and without sources of natural light. ■ It also implies that whoever made them did not want them to be easily found. ■ Since cave dwellers normally lived close to entrances, there must have been some reason why so many generations of Lascaux cave dwellers hid their art.

Scholars offer three related but different opinions about the mysterious origin and significance of these paintings. One opinion is that the paintings were a record of seasonal migrations made by herds. Because some paintings were made directly over others, obliterating them, it is probable that a painting's value ended with the migration it pictured. Unfortunately, this explanation fails to explain the hidden locations, unless the migrations were celebrated with secret ceremonies.

➡ Another opinion is that the paintings were directly related to hunting and were an essential part of a special preparation ceremony. This opinion holds that the pictures and whatever ceremony they accompanied were an ancient method of psychologically motivating hunters. It is conceivable that before going hunting the hunters would draw or study pictures of animals and imagine a successful hunt. Considerable support exists for this opinion because several animals in the pictures are wounded by arrows and spears. This opinion also attempts to solve the overpainting by explaining that an animal's picture had no further use after the hunt.

➡ A third opinion takes psychological motivation much further into the realm of tribal ceremonies and mystery: the belief that certain animals assumed mythical significance as ancient ancestors or protectors of a given tribe or clan. Two types of images substantiate this theory: the strange, indecipherable geometric shapes that appear near some animals, and the few drawings of men. Wherever men appear they are crudely drawn and their bodies are elongated and rigid. Some men are in a prone position and some have bird or animal heads. Advocates for this opinion point to reports from people who have experienced a trance state, a highly suggestive state of low consciousness between waking and sleeping. Uniformly, these people experienced weightlessness and the sensation that their bodies were being stretched lengthwise. Advocates also point to people who believe that the forces of nature are inhabited by spirits, particularly shamans* who believe that an animal's spirit and energy is transferred to them while in a trance. One Lascaux narrative picture, which shows a man with a birdlike head and a wounded animal, would seem to lend credence to this third opinion, but there is still much that remains unexplained. For example, where is the proof that the man in the picture is a shaman? He could as easily be a hunter wearing a headmask. Many tribal hunters, including some Native Americans, camouflaged themselves by wearing animal heads and hides.

➡ Perhaps so much time has passed that there will never be satisfactory answers to the cave images, but their mystique only adds to their importance. Certainly a great art exists, and by its existence reveals that ancient human beings were not without intelligence, skill, and sensitivity.

13. The word **others** in the passage refers to

- chambers
- paintings
- beasts
- parades

14. The word **Methods** in the passage is closest in meaning to

- Ways
- Shades
- Stages
- Rules

15. What are the bones found in the Lascaux caves believed to indicate?

- Wild animals sometimes lived in the cave chambers.
- Artists painted pictures on both walls and bones.
- Artists ground them into a fine powder to make paint.
- Artists developed special techniques for painting the walls.

16. Why does the author mention Bushmen in South Africa in paragraph 2?

- To suggest that ancient artists from all over the world painted animals on rocks
- To contrast the location of their rock paintings to those found at Lascaux
- To support the claim that early artists worked in cramped spaces
- To give an example of other artists who painted in hidden locations

Paragraph 2 is marked with an arrow [→]

17. What can be inferred from paragraph 2 about cave painters in France and Spain?

- They also painted rocks outside caves.
- They did not live close to the cave entrances.
- They developed their own sources of light to use while painting.
- Their painting practices did not last for many years.

Paragraph 2 is marked with an arrow [→]

18. Why does the author mention secret ceremonies?

- To present a common opinion held by many scholars
- To suggest a similarity between two opinions held by scholars
- To suggest a possible explanation for a weakness in an opinion expressed in the passage
- To give evidence that contradicts a major opinion expressed in the passage

19. The word accompanied in the passage is closest in meaning to

- represented
- developed into
- were associated with
- came after

20. According to paragraph 4, why do some scholars believe that the paintings were related to hunting?

- Because some tools used for painting were also used for hunting
- Because cave inhabitants were known to prefer animal food rather than plant food
- Because some of the animals are shown wounded by weapons
- Because many hunters were also typically painters

Paragraph 4 is marked with an arrow [→]

21. According to paragraph 5, why do some scholars refer to a trance state to help understand the cave paintings?

- To explain the state of consciousness the artists were in when they painted their pictures
- To demonstrate the mythical significance of the strange geometric shapes
- To indicate that trance states were often associated with activities that took place inside caves
- To give a possible reason for the strange appearance of the men painted on the cave walls

Paragraph 5 is marked with an arrow [→]

Paragraph 5 is marked with an arrow [→].

22. According to paragraph 5, if the man pictured with the birdlike head is not a shaman, he may have worn the headmask

- to look like an animal while a hunt took place
- to frighten off other hunters competing for food
- to prove that he is not a shaman
- to resist forces of nature thought to be present in animals

Paragraph 5 is marked with an arrow [→].

23. According to paragraph 6, why might the puzzling questions about the paintings never be answered?

- Keeping the paintings a mystery will increase their importance.
- The artists hid their tools with great intelligence and skill.
- Too many years have gone by since the images were painted.
- Answering the questions is not very important to scholars.

Paragraph 6 is marked with an arrow [→].

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

This made it easy for the artists to paint and display them for the rest of the cave dwellers.

Where would the sentence best fit?

Click on a square [■] to add the sentence to the passage.

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

Scholars have wondered about the meaning of the subjects, location, and overpainting of Lascaux cave images.

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Answer Choices

The paintings may have recorded information about animal migrations, and may only have been useful for one migration at a time.

Unlike painters of the recently discovered paintings, other Lascaux cave painters usually painted on rocks near cave entrances or in open spaces outside the caves.

The human figures represented in the paintings appear to be less carefully shaped than those of animals.

Some scholars believe that the paintings motivated hunters by allowing them to picture a successful hunt.

It is possible that the animals in the paintings were of mythical significance to the tribe, and the paintings reflected an important spiritual practice.

Scientific analysis suggests that paintings were sprayed onto the rock walls with tubes made from animal bones.

Drag your answer choices to the spaces where they belong. To remove an answer choice, click on it. To review the passage, click on **View Text**.