

TOEFL Junior : Reading Comprehension Test 3

Read the passage . 60 - 100 minutes

Destructive Eruptions in Ancient Italian Cities

Mount Vesuvius, a volcano located between the ancient Italian cities of Pompeii and Herculaneum, has received much attention because of its frequent and destructive eruptions. The most famous of these eruptions occurred in A.D. 79.

The volcano had been inactive for centuries. There was little warning of the coming eruption, although one account unearthed by archaeologists says that a hard rain and a strong wind had disturbed the celestial calm during the preceding night. Early the next morning, the volcano poured a huge river of molten rock down upon Herculaneum, completely burying the city and filling the harbor with coagulated lava.

Meanwhile, on the other side of the mountain, cinders, stone and ash rained down on Pompeii. Sparks from the burning ash ignited the combustible rooftops quickly. Large portions of the city were destroyed in the conflagration. Fire, however, was not the only cause of destruction. Poisonous sulfuric gases saturated the air. These heavy gases were not buoyant in the atmosphere and therefore sank toward the earth and suffocated people.

Over the years, excavations of Pompeii and Herculaneum have revealed a great deal about the behavior of the volcano. By analyzing data, much as a zoologist dissects an animal specimen, scientists have concluded that the eruption changed large portions of the area's geography. For instance, it turned the Sarno River from its course and raised the level of the beach along the Bay of Naples. Meteorologists studying these events have also concluded that Vesuvius caused a huge tidal wave that affected the world's climate.

In addition to making these investigations, archaeologists have been able to study the skeletons of victims by using distilled water to wash away the volcanic ash. By strengthening the brittle bones with acrylic paint, scientists have been able to examine the skeletons and draw conclusions about the diet and habits of the residents. Finally, the excavations at both Pompeii and Herculaneum have yielded many examples of classical art, such as jewelry made of bronze, which is an alloy of copper and tin. The eruption of Mount Vesuvius and its tragic consequences have provided everyone with a wealth of data about the effects that volcanoes can have on the surrounding area. Today, volcanologists can locate and predict eruptions, saving lives and preventing the destruction of other cities and cultures.

INSTRUCTION:

Read the questions carefully and refer to the text above then choose the best answer:

1. Herculaneum and its harbor were buried under _____ lava.

- A. liquid
- B. solid
- C. flowing
- D. gas
- E. Answer not available

2. The poisonous gases were not _____ in the air.

- A. able to float
- B. visible
- C. able to evaporate
- D. invisible
- E. able to condense

3. Scientists analyzed data about Vesuvius in the same way that a zoologist _____ a specimen.

- A. describes in detail
- B. studies by cutting apart
- C. photographs
- D. chart
- E. Answer not available

4. _____ have concluded that the volcanic eruption caused a tidal wave.

- A. Scientists who study oceans
- B. Scientists who study atmospheric conditions
- C. Scientists who study ash
- D. Scientists who study animal behavior
- E. Answer not available in article

5. Scientists have used _____ water to wash away volcanic ash from the skeletons of victims.

- A. bottled
- B. volcanic
- C. purified
- D. sea
- E. fountain

Answers and Explanations

1. B: "Coagulated" means solidified. Liquid (A) is an opposite of solid. Flowing (C) assumes a liquid, not solid, state. Gas (D) is another opposite of solid. (Three states of matter, like volcanic material, are liquid, solid, and gaseous.)

2. A: "Buoyant" means able to float. The passage indicates this by indicating that the gases therefore, sank toward earth and suffocated people. Buoyant does not mean visible (B) or possible to see. Able to float/buoyant does not mean able to evaporate (C). Evaporation means turning to vapor, which only liquids can do. Gases are already vapors. Buoyant does not mean invisible (D) or unseen. Able to float does not mean able to condense (E), i.e. turn from vapor to liquid.

3. B: "Dissect" means to cut apart for study. It does not mean to describe in detail (A), to photograph (C), or to chart (D) a specimen.

4. B: Meteorologists are scientists who study atmospheric conditions, particularly weather. Scientists who study oceans (A) are oceanographers, i.e. marine scientists. Scientists who study ash (C) do not exist as members of a separate discipline. Climate scientists and many others concerned with its effects study volcanic ash. Scientists who study animal behavior (D) are ethologists or animal behaviorists and do not study ash.

5. C: Distilled water is purified water. Distilled water is not equivalent to bottled (A), volcanic (B), sea (D), or fountain (E) water.