

# STEP準1級 読解問題演習

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*Read the passage and choose the best answer from among the four choices for each question.*

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## *Martians in Our Midst?*

In 1996, NASA scientists announced they had discovered tiny fossil organisms in an ancient meteorite from Mars. Controversy erupted immediately. Critics argued that the fossils were too small to be considered remains of a living organism. Researchers, however, have since found evidence that these minute organisms, which they call "nanobes," may well be one of the most common forms of life on Earth.

The debate about these objects actually began several years before the NASA discovery — when University of Texas geologist Dr. Robert Folk found what he claimed were fossils of a tiny life form, about one-tenth the size of bacteria, in mineral deposits near volcanoes. Many scientists dismissed this claim because, it was argued, these fossils were too small to contain the cells needed for organic life. The NASA announcement added some weight to Dr. Folk's hypothesis, but until recently much of the mainstream scientific community regarded his theory as false.

Conventional wisdom was shaken, however, by a further discovery that was made inside ancient sandstone recovered from an oil-drilling site five kilometers under the Australian seabed. University of Queensland geologist Dr. Philippa Uwins did not find fossils but rather what she believes are actual living examples of these miniature bacteria. Dr. Uwins claims to have observed these nanobes multiplying under her microscope and says the tiny objects fulfill many criteria of biological life. "Their colonies grow spontaneously, they contain genetic material, and their chemical and biological structures are consistent with life," she said.

Other research suggests these nanobes may be found all over the world and could even be involved in many processes presently thought to be controlled by inorganic chemical reactions. For example, theories have been put forward about these organisms being responsible for the "greening" of copper and the rusting of metal. Researchers in Finland even claim to have found these tiny bacteria in human kidney stones, giving rise to theories that they may play a part in some human diseases.

But the discovery of possible nanobe fossils in a Martian meteorite may even have implications for our very understanding of human life. As Dr. Uwins points out: "If it is proven beyond doubt scientifically that such small organisms exist, it will be a major contribution to the controversial debate concerning extraterrestrial life and the origin of life on Earth," she said.

So far, researchers do not have conclusive evidence that nanobes are biological, but Dr. Uwins is hoping to prove her theory by extracting DNA from these objects. If she succeeds, the irony is obvious. After years of searching for evidence of life elsewhere in our solar system and beyond, we may come to the realization that there have always been Martians in our midst.

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- (1) According to the passage, critics of the nanobe discovery cannot accept
  - 1 Dr. Folk's theory that living organisms could survive in a volcano.
  - 2 NASA's claim in 1996 to have discovered an ancient Martian meteorite.
  - 3 the idea that objects one-tenth the size of bacteria could be living organisms.
  - 4 the idea that finding fossils in a meteorite proves that such organisms also live on Earth.
- (2) The author's use of the term "conventional wisdom" refers to the belief that
  - 1 nanobes cannot be fossilized.
  - 2 nanobes are not living organisms.
  - 3 sandstone contains miniature bacteria.
  - 4 extraterrestrial life has not yet been discovered.
- (3) Which of the following statements is true according to the passage?
  - 1 Most mainstream scientists supported the NASA scientists' theory.
  - 2 Robert Folk's claim was welcomed by the scientific community.
  - 3 NASA scientists claimed to have found organisms living in a Martian meteorite.
  - 4 Robert Folk found remains of lifelike organisms in mineral deposits near volcanoes.
- (4) Who claims to have found living nanobes?
  - 1 Dr. Folk.
  - 2 Dr. Uwins.
  - 3 NASA scientists.
  - 4 Mainstream scientists.
- (5) What conclusion can be drawn from this passage?
  - 1 The lack of support for the nanobe theory will seriously endanger future DNA research.
  - 2 Recent evidence on biological organisms makes the nanobes debate unnecessary.
  - 3 The mainstream scientific community's resistance to the nanobe theory will win out in the end.
  - 4 Evidence suggests that nanobes may exist both on Earth and elsewhere in our solar system.