

READING PRACTICE SET 1

Questions 1-11 are based on the following passage.

In this excerpt, a Nobel Prize-winning scientist discusses ways of thinking about extremely long periods of time.

There is one fact about the origin of life that is reasonably certain. Whenever and wherever it happened, it started a very long time ago, so long
Line ago that it is extremely difficult to form any realistic
5 idea of such vast stretches of time. The shortness of human life necessarily limits the span of direct personal recollection.

Human culture has given us the illusion that our memories go further back than that. Before writing
10 was invented, the experience of earlier generations, embodied in stories, myths and moral precepts to guide behavior, was passed down verbally or, to a lesser extent, in pictures, carvings, and statues. Writing has made more precise and more extensive
15 the transmission of such information and, in recent times, photography has sharpened our images of the immediate past. Even so, we have difficulty in contemplating steadily the march of history, from the beginnings of civilization to the present day, in
20 such a way that we can truly experience the slow passage of time. Our minds are not built to deal comfortably with periods as long as hundreds or thousands of years.

Yet when we come to consider the origin of life,
25 the time scales we must deal with make the whole span of human history seem but the blink of an eyelid. There is no simple way to adjust one's thinking to such vast stretches of time. The immensity of time passed is beyond our ready comprehension.
30 One can only construct an impression of it from indirect and incomplete descriptions, just as a blind man laboriously builds up, by touch and sound, a picture of his immediate surroundings.

The customary way to provide a convenient
35 framework for one's thoughts is to compare the age

of the universe with the length of a single Earthly day. Perhaps a better comparison, along the same lines, would be to equate the age of our earth with a single week. On such a scale the age of the universe, since the Big Bang, would be about two or three
40 weeks. The oldest macroscopic fossils (those from the start of the Cambrian period*) would have been alive just one day ago. Modern man would have appeared in the last ten seconds and agriculture in the last one or two. Odysseus** would have lived only half a second before the present time.

Even this comparison hardly makes the longer time scale comprehensible to us. An alternative is to draw a linear map of time, with the different events
50 marked on it. The problem here is to make the line long enough to show our own experience on a reasonable scale, and yet short enough for convenient reproduction and examination. But perhaps the most vivid method is to compare time to the lines of print
55 themselves. Let us make a 200-page book equal in length to the time from the start of the Cambrian to the present; that is, about 600 million years. Then each full page will represent roughly 3 million years, each line about ninety thousand years and each letter
60 or small space about fifteen hundred years. The origin of the Earth would be about seven books ago and the origin of the universe (which has been dated only approximately) ten or so books before that. Almost the whole of recorded human history would be
65 covered by the last two or three letters of the book.

If you now turn back the pages of the book, slowly reading one letter at a time—remember, each letter is fifteen hundred years—then this may convey to you something of the immense stretches
70 of time we shall have to consider. On this scale the span of your own life would be less than the width of a comma.

* *Cambrian period*: the earliest period in the Paleozoic era, beginning about 600 million years ago

** *Odysseus*: the most famous Greek hero of antiquity; he is the hero of Homer's *The Odyssey*, which describes the aftermath of the Trojan War (ca. 1200 B.C.)

1. The central idea of the passage is that
 - A) human life is short in comparison to the age of the Earth.
 - B) life on the Earth started an extremely long time ago.
 - C) scientists have difficulty figuring out when life began.
 - D) it is hard to form a realistic sense of the vastness of time.
2. The author's stance can best be described as that of
 - A) a humorist trying to make a scientific topic entertaining for readers.
 - B) a scholar providing evidence to support a newly devised theory.
 - C) a journalist trying to persuade readers to improve their understanding of history.
 - D) an expert presenting an abstract idea in an accessible manner.
3. The passage most strongly suggests that which of the following is true of humans?
 - A) A human life is extremely short relative to the span of time since the Earth began.
 - B) Photography has helped humans understand the passage of time.
 - C) Human development can be traced through written stories and myths, as well as artwork, of long ago.
 - D) Humans have a better understanding of the age of the universe when it is compared to the length of a single day.
4. Which choice provides the best evidence for the answer to the previous question?
 - A) Lines 9-12 ("Before writing ... verbally")
 - B) Lines 14-17 ("Writing has made ... immediate past")
 - C) Lines 34-37 ("The customary ... Earthly day")
 - D) Lines 70-72 ("On this scale ... a comma")
5. The author discusses several kinds of time scales primarily to demonstrate the
 - A) difficulty of assigning precise dates to past events.
 - B) different choices scientists have when investigating the origin of life.
 - C) evolution of efforts to comprehend the passage of history.
 - D) immensity of time since life on Earth began.
6. As used in line 11, "embodied" most nearly means
 - A) symbolized.
 - B) exemplified.
 - C) personified.
 - D) embraced.
7. The author uses the analogy of the blind man in lines 31-33 to primarily show that
 - A) humans are unable to comprehend long periods of time.
 - B) human history occupies only a fraction of the time since life began.
 - C) long periods of time can be understood only indirectly.
 - D) humans refuse to learn from lessons of the past.

8. Which choice provides the best evidence for the answer to the previous question?
- A) Lines 5-7 (“The shortness ... recollection”)
 - B) Lines 24-27 (“Yet ... an eyelid”)
 - C) Lines 30-31 (“One can only ... descriptions”)
 - D) Lines 63-65 (“Almost the whole ... book”)
9. As used in line 29, “ready” most nearly means
- A) immediate.
 - B) willing.
 - C) set.
 - D) prepared.
10. The purpose of the references to the Big Bang and the Cambrian period in lines 39-43 is to
- A) suggest that agriculture was a relatively late development in human history.
 - B) illustrate that the Earth’s age can be understood using the time scale of a week.
 - C) argue that there are no existing fossils that predate the Cambrian period.
 - D) indicate that the Cambrian period lasted 600 million years.
11. According to lines 48-53, one difficulty in using a linear representation of time is that
- A) linear representations of time do not meet accepted scientific standards of accuracy.
 - B) prehistoric eras overlap each other, making linear representation deceptive.
 - C) a scale that allots enough space to show human experience clearly would make the map too long to copy and use.
 - D) our knowledge of pre-Cambrian time is insufficient to construct an accurate linear map.