

Question 1-11 are based on the following passage.

False or False: The Question of Falsifiability

What is the difference between science and pseudoscience? According to Karl Popper, one of the most **1** potent philosophers of the twentieth century, it is a matter of *falsifiability*. He claimed that in order to be considered truly scientific, a hypothesis or theory must be capable of being proven false. **2** Next, he decided to make an assertion: Popper offered a new perspective on the distinction between science and pseudoscience.

1

- A) NO CHANGE
- B) pervasive
- C) saturating
- D) influential

2

Which choice creates the smoothest and most logical transition?

- A) NO CHANGE
- B) Therefore, with this controversial assertion,
- C) Through this controversial assertion,
- D) DELETE the underlined portion.

In a 1953 lecture at Cambridge University, Popper shared that the concept of falsifiability had first occurred to him more than thirty years earlier, **3** when he was pondering and considering Einstein’s theory of gravitation and Freud’s psychoanalytical approach. Popper realized that Freud’s approach has great “explanatory power,” because psychoanalysis can be applied to completely opposite behavior patterns with equal aptness. Although this flexibility might seem valuable, Popper argued that a theory which cannot be proven false—one which can ‘adapt’ to any critical environment—is not science but pseudoscience. The critical component of a scientific theory is the element of risk; **4** its value lies in predictive rather than explanatory power. **5** Einstein’s theory of gravitation was scientific because it made concrete predictions about what we should observe in the future, and therefore could be falsified if inconsistent **6** to these observations.

3

- A) NO CHANGE
- B) at a time in his life that was when he had been
- C) while he was
- D) during the time when he was pondering and

4

- A) NO CHANGE
- B) their
- C) it’s
- D) they’re

5

At this point, the writer is considering adding the following sentence.

Predictive power can be illustrated by examining the work of Albert Einstein, who, though born in Germany, conducted much of his scientific work in the United States after he immigrated in 1933.

Should the writer make this addition here?

- A) Yes, because it introduces an example of a scientist whose work can be analyzed using Popper's approach.
- B) Yes, because it illustrates that other highly regarded scientists agreed with Popper's approach to the scientific method.
- C) No, because it digresses from the main topic of the paragraph by introducing unrelated details.
- D) No, because it blurs the paragraph's focus on Einstein's theory of gravitation.

6

- A) NO CHANGE
- B) for
- C) with
- D) by

Popper's choice of falsifiability as the line of demarcation between science and pseudoscience initially seemed counterintuitive to many scientists and philosophers. Traditionally, the difference had been located in the process of observation and experiment. In addition, many researchers preferred hypotheses that seemed less likely to be proven false. **7** However, many members of the scientific community may have, at least initially, misunderstood the concept of falsifiability. The overarching objective of Popper's approach is not to choose the weaker **8** hypothesis and choose the hypothesis which will lead us towards truth. Because scientific theories can never be proven true, our progress depends on using theories which, like Einstein's theory of gravitation, can be proven false. Statements without predictive power are **9** static because, they cannot be disproven, we cannot move forwards.

7

The writer is considering deleting the underlined sentence. Should the writer make this deletion?

- A) Yes, because it interrupts the paragraph's discussion of the scientific community's rejection of Popper's assertion.
- B) Yes, because it restates information from the first part of the paragraph about the critical reception of Popper's assertion.
- C) No, because it clarifies the easily misunderstood concept of falsifiability with more specific details.
- D) No, because it introduces the misconception that the writer addresses in the rest of the paragraph.

8

- A) NO CHANGE
- B) hypothesis, and choosing
- C) hypothesis that choosing
- D) hypothesis but to choose

9

- A) NO CHANGE
- B) static: because
- C) static because—
- D) static, because,

Although the distinction between science and pseudoscience **10** remains controversial, falsifiability has many valuable implications for the scientific method and beyond. Although Popper devised this concept to answer a particular question, he believed that it was the key to answering many other problems as well. Falsifiability can be applied universally because we search for truth in all areas— **11** even though Freud's psychoanalytic approach is still studied.

10

- A) NO CHANGE
- B) were remaining
- C) have remained
- D) remain

11

The writer wants to provide a conclusion that reiterates a central idea of the passage. Which choice most effectively accomplishes this goal?

- A) NO CHANGE
- B) even though Popper's theory still has some outspoken skeptics.
- C) even if we can only approach this truth by eliminating what is false.
- D) even if the scientific method remains inflexible.