

Instructions

Read the following passage and answer the questions that follow.

Like Galileo, Newton (1)stressed the importance of comparing theories and models with experiments and observations of the real world, and always (a) relevant experiments himself, (b) possible, to test his ideas. This is so deeply (2)ingrained (c) part of the scientific method today that it may seem obvious, even to non-scientists, and it is hard to appreciate the extent to which, even into the seventeenth century, many philosophers would speculate about the nature of the physical world in an abstract way, without ever getting their hands dirty in experiments. The classic example [whether / about / is / the argument] two different weights dropped from the same height at the same time would hit the ground together.

*ingrained「深く根付いた」

Questions

Q1. Vocabulary(6 points)

Choose the word that is closest in meaning to the boldfaced word.

(1) stressed

- ① ignored ② emphasized ③ doubted ④ discovered

(2) relevant

- ① recent ② formal ③ related ④ accidental

(3) ingrained

- ① temporary ② unclear ③ deeply fixed ④ newly learned

Q2. Fill-in-the-Blanks(6 points)

Choose the most appropriate word for each blank (a)-(c).

Choose from the options ①-⑤. Do not use the same word more than once.

- ① whenever ② carried out ③ that ④ as ⑤ which

Q3. Word Order(6 points)

Rearrange the words in brackets to complete the sentence.

The classic example [whether / about / is / the argument] two different weights ...

Q4. Grammar / Usage(6 points)

Choose the sentence in which that is used as an adverbial clause marker in the pattern so / such ~ that.

- ① Newton stressed that experiments are essential to science.
- ② The question that philosophers debated was about falling objects.
- ③ This method is so deeply ingrained today that it may seem obvious to non-scientists.
- ④ Many philosophers discussed that the physical world could be understood in an abstract way.

Q5. Translation(20 points)

Translate the underlined part into natural Japanese.

Q6. Reading Comprehension(12 points)

Choose the most appropriate answer to each question.

(1) What did Newton emphasize as important for science?

- ① Creating theories without experiments
- ② Comparing theories with experiments and real-world observations
- ③ Avoiding experiments to stay objective
- ④ Depending only on abstract reasoning

(2) What does the author say was common even into the seventeenth century?

- ① Philosophers regularly conducted experiments.
- ② Many philosophers speculated without doing experiments.
- ③ Experiments were already standard scientific practice.
- ④ Philosophers rejected abstract thinking.

(3) What is given as the classic example?

- ① A debate about planets
- ② A debate about whether two weights fall together
- ③ A debate about scientific method
- ④ A debate about laboratory tools