

Question 1

Correct

Marked out of 1.00

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What are the essential characteristics of scientific work?

- ☒ a. Use of technical language ☑
- ☒ b. Systematic and comprehensible approach ☑
- ☐ c. No reference to sources
- ☐ d. Subjective expressions of opinion

Question 2

Partially correct

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Which of the following hypotheses is scientifically relevant?

- ☐ a. "Sport is important because I feel better afterwards."
- ☐ b. "If people exercise for at least 30 minutes a day, they will never get sick."
- ☐ c. "People should exercise more because it is good for their health."
- ☒ d. "If people exercise for at least 30 minutes a day, their physical fitness will improve." ☑

Question 3

Correct

Marked out of 1.00

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Which of the following statements describe potential problems when using generative AI (e.g. ChatGPT) in scientific work?

- ☒ a. Generative AI can reduce the scientific depth of a paper if it is used uncritically. ☑
- ☐ b. Generative AI can be used without restriction as a substitute for your own scientific analyses.
- ☒ c. Generative AI can provide inaccurate or incorrect information. ☑
- ☒ d. The use of generative AI can lead to plagiarism if content is adopted without citing the source. ☑

Question 4

Partially correct

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Which of the following statements correctly describe(s) the concept of falsifiability?

- ☒ a. A statement that is not falsifiable has no scientific relevance. ☑
- ☒ b. A statement is falsifiable if it is logically possible to disprove it. ☑
- ☒ c. All scientific theories are falsifiable. ☑
- ☐ d. Falsifiability means that a statement is always true.

Question 5

Partially correct

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Which of the following statements describe the importance of operationalization?

- ☒ a. It makes theoretical constructs measurable. ☑
- ☐ b. It is used to create bibliographies.
- ☐ c. It replaces the need for hypotheses.
- ☒ d. It makes it possible to test hypotheses. ☑

Question 1

Correct

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Which of the following characteristics contribute to the validity of scientific measurements?

- ☐ a. The measurements were supported by funding.
- ☐ b. The measurements must have a high degree of complexity.
- ☒ c. The measurements are repeatable and consistent (reliability). ✓
- ☒ d. The measurements actually capture what they are intended to capture. ✓

Question 2

Partially correct

Marked out of 1.00

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Which of the following statements are correct with regard to operationalization?

- ☒ a. It makes theoretical constructs measurable by forming hypotheses. ✓
- ☐ b. It describes the interaction between different disciplines.
- ☐ c. It is part of the practice of scientific work in which theories are tested.
- ☐ d. It is based on the axioms of a paradigm.

Question 3

Correct

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"If people exercise at least 30 minutes a day, they are less likely to develop heart disease." Why is this statement a valid hypothesis?

- ☐ a. Because it is an emotional appeal.
- ☐ b. Because it can be used to express a personal opinion.
- ☒ c. Because it can be operationalized. ✓
- ☒ d. Because it can be disproven. ✓

?

Question 4

Correct

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Which of the following statements apply to the relationship between sample and population?

- ☐ a. Results found in a sample always automatically apply to the entire population.
- ☒ b. The sample should reflect the characteristics of the population as closely as possible. ✓
- ☐ c. The population always consists of a smaller group than the sample.
- ☒ d. A representative sample makes it possible to generalize results to the population. ✓

Question 5

Correct

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You have parts of your work written by ChatGPT. Why is this problematic?

- ☒ a. It may result in a lack of scientific depth. ✓
- ☒ b. Using ChatGPT can lead to plagiarism. ✓
- ☐ c. ChatGPT can provide up-to-date and verified information, therefore it is a reliable source.
- ☒ d. The information provided by ChatGPT may be inaccurate or incomplete. ✓