

*Test Bank for Introduction to Statistics
and Data Analysis Using Stata 2nd
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Introduction to Statistics and Data Analysis Using Stata (2nd)

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Total Questions: 24

Multiple Choice (10)

Q1. [Multiple Choice] · Cognitive Domain: Application

Which example best demonstrates applying the scientific method to create new knowledge?

- a) drawing conclusions from what one believes to be logically true
- b) using a questionnaire to gather opinions from knowledgeable sources
- c) gathering information from the internet, then deciphering what is correct
- d) **developing and testing hypotheses that can be evaluated from observations ✓ correct**

Q2. [Multiple Choice] · Cognitive Domain: Comprehension

Which is a key feature of the scientific method?

- a) relying on expert opinion
- b) making a convincing argument
- c) **testing hypotheses using observations ✓ correct**
- d) examining the historical context of research findings

Q3. [Multiple Choice] · Cognitive Domain: Knowledge

Information published in a peer-reviewed scientific journal is different from other sources of information because it is _____.

- a) written for a wider audience
- b) **evaluated by more than one scholar ✓ correct**
- c) accessible in electronic databases
- d) housed in academic libraries

Q4. [Multiple Choice] · Cognitive Domain: Analysis

Which source can be considered scholarly literature?

- a) editorial articles in newspapers
- b) online blogs from experts in a field
- c) information in well-known magazines
- d) **articles in peer-reviewed journals ✓ correct**

Q5. [Multiple Choice] · Cognitive Domain: Knowledge

Research that is evaluated by at least two experts before it is accepted for publication is a key feature of the _____ process.

- a) literature review
- b) **peer review ✓ correct**
- c) theory evaluation
- d) data analysis

Q6. [Multiple Choice] · Cognitive Domain: Comprehension

Which approach is the most appropriate when developing a scientific research question?

- a) casual observations of behavior to uncover patterns
- b) **careful review of the literature to identify knowledge gaps ✓ correct**
- c) consultation with experts about questions that remain unanswered
- d) generation of hypotheses based on one's current assumptions

Q7. [Multiple Choice] · Cognitive Domain: Knowledge

A _____ is a comprehensive explanation of a phenomenon that is best supported by a large body of evidence.

- a) deduction
- b) literature review
- c) hypothesis
- d) theory ✓ correct**

Q8. [Multiple Choice] · Cognitive Domain: Analysis

Theories and hypotheses have which of the following in common?

- a) They apply to variables that extend beyond their specific domain.
- b) They describe a universal and consistent relationship between two or more variables.
- c) They are updated or refuted based on new evidence. ✓ correct**
- d) They are difficult to test using observational methods.

Q9. [Multiple Choice] · Cognitive Domain: Application

Which statement is the best example of a hypothesis?

- a) As anxiety about social rejection increases, self-esteem decreases. ✓ correct**
- b) How much has social rejection increased since the arrival of social media?
- c) Why should anxiety about social rejection and self-esteem be related?
- d) Recent studies have shown that social rejection lowers self-esteem.

Q10. [Multiple Choice] · Cognitive Domain: Knowledge

After a hypothesis is determined, which step in the research process should immediately follow?

- a) analyze the data
- b) develop the research method ✓ correct**
- c) write the introduction to a research paper
- d) write the research paper

True/False (9)

Q11. [True/False] · Cognitive Domain: Knowledge

The scientific method is based on systematic observation, measurement, and experimentation to modify, test, and refine hypotheses.

- a) True ✓ correct**
- b) False

Correct answer: True

Q12. [True/False] · Cognitive Domain: Comprehension

Information derived from research that is presented by experts is an example of peer review.

- a) True
- b) False ✓ correct**

Correct answer: False

Q13. [True/False] · Cognitive Domain: Comprehension

One should be skeptical of scientific claims that come from articles that have not been peer reviewed.

- a) True ✓ correct**
- b) False

Correct answer: True

Q14. [True/False] · Cognitive Domain: Knowledge

Identifying gaps in the literature is an appropriate strategy for generating research questions.

a) True ✓ correct

b) False

Correct answer: True

Q15. [True/False] · Cognitive Domain: Knowledge

A scientific theory is defined as a testable prediction.

a) True

b) False ✓ correct

Correct answer: False

Q16. [True/False] · Cognitive Domain: Application

The statement, "When people believe that a commodity is scarce, they will spend more money for it than when they believe that it is plentiful," is an example of a theory.

a) True

b) False ✓ correct

Correct answer: False

Q17. [True/False] · Cognitive Domain: Knowledge

Scientific hypotheses must be testable.

a) True ✓ correct

b) False

Correct answer: True

Q18. [True/False] · Cognitive Domain: Knowledge

A dependent variable is a variable that causes changes in another variable.

a) True

b) False ✓ correct

Correct answer: False

Q19. [True/False] · Cognitive Domain: Knowledge

The final step of the research process is to analyze the data.

a) True

b) False ✓ correct

Correct answer: False

Essay (5)

Q20. [Essay] · Cognitive Domain: Analysis

Explain how scholarly literature is different from other sources of information.

Suggested answer: Sample response: Scholarly literature has undergone the peer review process in which the information that is being presented has been reviewed and evaluated by experts in the field of study. This gives them more credibility than other sources of information.

Q21. [Essay] · Cognitive Domain: Analysis

How are laws different from theories and hypotheses?

Suggested answer: Sample response: Laws have substantial empirical evidence to support the relationship between the variables that are stated in the law. Laws describe a universal and consistent relationship between at least two variables. On the other hand, hypotheses are testable predictions that can be updated based on new evidence.

Q22. [Essay] · Cognitive Domain: Application

Provide an example of a hypothesis that is derived from a research question.

Suggested answer: Sample response: A research question might ask, "Do people remember more details of an event when they are emotionally aroused?" This could be used to generate the following hypothesis: "People will recall the details of an event more accurately when they are emotionally aroused compared to when they are not experiencing emotional arousal."

Q23. [Essay] · Cognitive Domain: Analysis

Give two reasons why one should review the literature to develop a research question.

Suggested answer: Sample response: Reviewing the literature enables one to identify whether the information relevant to the problem has been published in a source that has been peer reviewed. Peer-reviewed sources of information are more likely to be of higher quality and trustworthy compared to information that has not been peer reviewed because they have been scrutinized for methodological and logical flaws. Review of the literature enables the researcher to identify gaps in the literature where our understanding and explanations of a phenomenon are lacking. In addition, review of the literature also gives information about the most recent theoretical developments in an area, which can direct specific questions.

Q24. [Essay] · Cognitive Domain: Analysis

How is a replication study different from other studies?

Suggested answer: Sample response: A replication study is designed to reproduce the findings from a previously published study by repeating the procedures that were carried out in the original study. This is to see if the same pattern of results is obtained from a different group of participants. Sometimes, the characteristics of participant groups are related to measurements on the dependent variable. When this happens, replication studies enable researchers to determine whether a phenomenon is consistent across participant groups, or whether it is isolated to specific groups of participants.