1. The scientific method relies upon *this* way of obtaining information.

a. Intuition
b. Legal reasoning
*c. Empiricism
d. Jurisprudence

2. The question of whether marijuana should be legalized in the United States is an example of

a. An "is" question
*b. An "ought" question
c. A "theoretical" question
d. A "how" question

3. Denise plans to systematically investigate a research question through careful observation and experimentation. The toolbox of rules she will follow is called

a. A cross-examination
b. An anecdotal procedure
c. Journalism
*d. The scientific method

4. A prediction that researchers make before collecting data is called

a. A theory
*b. An a priori hypothesis
c. A post hoc hypothesis
d. A variable

5. A highly representative sample is important because it allows researchers to

a. Generalize to a wider sample
*b. Generalize to a wider population
c. Cherry pick specific participants
d. Maximize the homogeneity of their sample

6. If a study is reliable this means that the study produces

a. Meaningful results
b. Unbiased results
*c. Replicable results
d. Accurate results

7. A confound provides

a. A method for improving a study's internal validity
b. A method for improving a study's external validity
c. A necessary affect on the dependent variable
*d. An alternative explanation for a study's results

8. Danny measures couples' feelings of closeness in a dark or a brightly lit room. In this study, the room's brightness is the

a. Control variable
*b. Independent variable
c. Dependent variable
d. Confound

9. As part of an experiment on pro-social behavior, Kyle compliments or insults each participant and then measures how much time they are willing to donate to help the research project. In this example, the amount of time that the participants are willing to help is the

a. Confound variable
b. Independent variable
*c. Dependent variable
d. Control variable

10. All statistics are based on the logic

*a. probability
b. pseudo-science
c. observation
d. chance

General Feedback:
P. 9- All statistics are based on the logic of **probability**, and they all use the same criterion for evaluation.

11. A sample statistic is an estimate of

a. Reliability
b. Cultural values
*c. Population statistic
d. Randomness

12. A theory performs three major functions. Which of the following is NOT one of the main functions?

a. Organization
*b. Evaluation
c. Explanation
d. Prediction

General Feedback:

Theory does not "evaluate" is the correct answer. Evaluation is part of the Scientific Method steps, not a function of a theory. A theory description and explanation can include wording of the theory as an observed and understood phenomenon in terms of if A and B then C will result and thus C is a prediction based on the Theory modeled.

13. The larger the sample size, the more reliable and valid the sample statistics that are used to estimate population parameters is called

a. law of probability
*b. law of large numbers
c. law of statistical analysis
d. law of conversion

14. Statistics provide a set of quantitative tools that allow us to rule out as an explanation for the phenomenon under study the

a. confirmatory bias
b. confounding variables
c. null hypothesis
*d. randomness

15. Serendipity effect is

a. falsely rejecting the Null hypothesis
b. the confounding variable skewing the correlation
*c. accidentally discovering something fortunate
d. having valid yet unreliable data

16. A heuristic is

a. a simplifying algorithm
b. a simple form of bias
*c. a simplifying mental shortcut
d. a simplifying decision process

17. A hypothesis is NOT

a. derived from a theory
b. a statement of relationship
c. testable
*d. levels of the independent variable

18. Passing from generation to generation, the specific ways in which groups of people interact with each other, behave, and understand the world is called

*a. Culture

b. Genes
c. Society
d. Biases

19. Unlike cultural psychology, cross-cultural psychology focuses on

a. How culture influences psychological phenomena
*b. The universality of psychological processes
c. How culture influences thinking
d. How thinking influences culture

General Feedback:
P. 8- Cross-cultural psychology studies the universality of psychological processes across different cultures.

20. A statistical term that means "to come before" is

a. post hoc
b. apropos
*c. a priori
d. preceding

21. Transparency of a study's methods and procedures enhances the study's

a. Validity
*b. Replicability
c. Generalizability
d. Empiricism

General Feedback:
P. 12- "□ transparency allows for other researchers to see if the same study can be repeated in a different sample with the same finding."

22. Pseudoscientific "findings" are often believed because humans have difficulty thinking in probabilities so they instead rely on mental shortcuts or

*a. Heuristics
b. Cognitive illusions
c. Confirmatory biases
d. Empiricism

23. Scientists should adopt a doctrine of falsification when analyzing their results as a safeguard against

a. The self-correcting nature of science
*b. The confirmatory bias
c. Disproving their theory

d. Falsely rejecting their hypotheses

24. Epistemology is the branch of philosophy that explores

a. Cognitive illusions
*b. Ways of knowing
c. Logic
d. Probability theory

25. By using the scientific method, researchers work to produce reliable and valid results while avoiding

a. Peer review
b. Self-correction
c. Connectivity
*d. Selective observation

26. If a study is reliable, it must also be valid.

a. True
*b. False

27. If a study is valid, it must be reliable.

*a. True
b. False

28. Researchers try to maximize generalizability and minimize sample bias.

*a. True
b. False

29. Compared to a priori hypotheses, post hoc hypotheses are preferable.

a. True
*b. False

30. High quality experimental research typically controls all extraneous variables.

a. True
*b. False

31. When a researcher rules out all possible alternative explanations, a study is said to have high external validity.

a. True
*b. False

32. Focusing primarily on evidence that supports a hypothesis and not addressing evidence that refutes a hypothesis is an example of confirmatory bias.

*a. True
b. False

General Feedback:
Review p. 14 in conjunction with Pseudoscience.

33. The doctrine of falsification reflects the tendency of pseudoscientific studies to falsify results.

a. True
*b. False

34. The study of a specific construct using the scientific method requires that it can be objectively measured.

*a. True
b. False

35. The scientific method tells us that a research question is fully answered once an empirical study has documented its results.

a. True
*b. False

36. What is sample bias and why is it a problem in psychological research?

Correct Answer:
Sample bias is a specific form of bias in which certain members of a population are less likely than others to be included in a study (p. 7). Sample bias can produce misleading results (e.g., when researchers "cherry pick" participants who support their viewpoint) and can negatively affect the extent to which a study's findings can be generalized to a wider population.

37. What is culture and why must researchers consider culture when investigating psychological questions?

Correct Answer:

Culture refers to the collective beliefs, symbols, traditions, and ways of understanding the world that are specific to a society or group of individuals (p. 8). Researchers must be aware that not all cultures think and behave in the same way. When researchers sample individuals from one culture (usually their own), they must understand that this can limit the generalizability of their findings. Ensuring that our samples of research participants are representative of the diversity of the population is an important consideration in designing research.

38. Control is an important part of many empirical investigations. Define control and discuss how it relates to internal validity and generalizability.

Correct Answer:
Control refers to a researcher's ability to measure or account for extraneous variables that could invalidate a study's conclusions (p. 9). Control, therefore, increases a study's internal validity by reducing alternative explanations for a study's results. At the same time, control can limit generalizability. For example, researchers who control for gender by surveying only women cannot then generalize its results to men.

39. Define population and sample. Why do psychologists study samples rather than populations?

Correct Answer:
A population is a complete set of units (people, animals, plants, or things; p. 7). Usually we do not have the ability to access a complete population when investigating a psychological question nor do we need to collect data from the entire population in order to understand the population. Instead, we select a sample - a group of units - from the population and use the characteristics of this sample to infer characteristics of the population (p. 7). Provided that a sample is representative, this is an efficient way to understand the population.

40. What is pseudoscience and why is it easy to fall prey to the allure of pseudoscientific findings?

Correct Answer:
Pseudoscience is a field of study such as astrology or handwriting analysis that provides compelling and fascinating claims that people believe; however, these claims cannot withstand scientific scrutiny (p. 12). Pseudoscience takes advantage of basic flaws in human reasoning, such as cognitive illusions, reliance on heuristics, and biases towards confirming evidence (p. 14).

41. What is the scientific method and how does the scientific method affect research information?

Correct Answer:

The scientific method identifies a set of rules, procedures, and techniques that together form a unified conceptual framework-a formal way of thinking about a problem, idea, or question. The scientific method lays out a foundation for how information is collected, measured, examined, and evaluated (p. 1).

42. Compare and contrast reliability and validity (as they pertain to research studies) and discuss how reliability and validity are related.

Correct Answer:
Reliability refers to the consistency of a study's data (p. 9). A reliable study produces data that can be replicated. A valid study is a study that is answering the question it is asking. In other words, a valid study produces results that tell us about the specific phenomena under investigation (p. 9). Think of reliability and validity as two related but distinct standards that you should use to evaluate research. A reliable study may not necessarily be valid, but a valid study has to be reliable (p. 10).

43. Why is the gold standard for an unbiased sample one that is formed via a random process?

Correct Answer:
The closer the process for creating a sample is to purely random, the greater likelihood that the sample will be representative of a larger group. The objective is to maximize what is referred to as generalizability, which means the extent to which findings that are derived from a sample can be applied to a wider population. Remember, a major reason for the scientific method is to combat bias, and a key source of potential bias can originate from how a sample is selected.