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Chapter 2

Psychological Science

SECTION 1

MULTIPLE-CHOICE QUESTIONS:

1. Psychologists use the term _____ research to refer to research that answers fundamental questions about behavior. The term _____ research refers to research that provides solutions to everyday problems.
- a. academic; applied
 - b. practical; experimental
 - c. experimental; practical
 - d. basic; applied

Answer: d; Moderate

2. Which of the following best defines *basic research*?
- a. Research that answers fundamental questions about behavior
 - b. Research that is empirical
 - c. Research that is based on theory
 - d. Research that is objective

Answer: a; Easy

3. Which of the following best defines *applied research*?
- a. Research that investigates issues that have implications for everyday life
 - b. Research that is not as empirical as basic research
 - c. Research that is not based on prior theory
 - d. Research that answers fundamental questions about behavior

Answer: a ; Easy

4. Which of the following is the best example of *basic research*?
- a. A comparison of the relative effectiveness of two safe-sex campaigns
 - b. A study of the effect of a bilingual education program on academic performance
 - c. A laboratory investigation of the effect of rehearsal on list memory
 - d. An assessment of a program designed to reduce binge drinking among college students

Answer: c; Easy

5. Arif is conducting an investigation of the effect of a word's length on the time it takes to recognize it. Brandy is examining the extent to which several broad personality traits are related. Which of the following alternatives best describes the type of research each of these individuals is conducting?
- a. Both Arif and Brandy are conducting basic research.
 - b. Both Arif and Brandy are conducting applied research.
 - c. Arif is conducting basic research. Brandy is conducting applied research.
 - d. Arif is conducting applied research. Brandy is conducting basic research.

Answer: a; Moderate

6. Which statement best describes the relationship between basic and applied research?
- a. Applied research inspires basic research.
 - b. Applied and basic research influence each other.
 - c. Basic research drives applied research.
 - d. Applied and basic research are the same.

Answer: b; Easy

7. Which of the following best defines *empirical*?
- a. Providing assumptions about how to conduct research
 - b. Turning conceptual variables into measured variables
 - c. Free from the personal bias of the scientist
 - d. Based on systematic collection and analysis of data

Answer: d; Easy

8. In the _____ review process, research is screened and critiqued by scientists in the field before it is published.
- a. panel
 - b. scientific
 - c. expert
 - d. peer

Answer: d; Moderate

9. Which of the following alternatives correctly pairs a concept with its definition?
- a. empirical; procedures are free from the biases of the scientist
 - b. objective; statements are based on systematic data collection
 - c. scientific method; the procedures used to conduct empirical research
 - d. data; information collected through formal observation or measurement

Answer: d; Moderate

10. Which of the following sequence correctly orders scientific concepts from the most specific to the most general?

- a. empirical → data → scientific method
- b. data → scientific method → empirical
- c. data → empirical → scientific method
- d. empirical → scientific method → data

Answer: c; Difficult

11. A professor admonishes his graduate student on the basis that her research may have failed to control her own expectations regarding the outcome of the study. The professor is suggesting that the student's research may not be _____.

- a. empirical
- b. objective
- c. scientific
- d. rational

Answer: b; Moderate

12. Redoing and expanding previous research is termed _____.

- a. reproduction
- b. replication
- c. repetition
- d. restoration

Answer: b; Moderate

13. The physical sciences contain some principles that are so general that they apply to all situations. These are termed _____.

- a. laws
- b. theories
- c. axioms
- d. precepts

Answer: a; Easy

14. As compared to the physical sciences, psychology has:

- a. an equal number of laws
- b. fewer theories
- c. more laws
- d. fewer laws

Answer: d; Easy

15. Andrea is reading a general, comprehensive explanation of the causes of human aggression in the introduction to a research report in psychology. Andrea is reading a(n):

- a. theory
- b. hypothesis
- c. operational definition
- d. explanation

Answer: a; Moderate

16. Which of the following best defines an *operational definition*?

- a. An integrated set of principles for understanding data
- b. An integrated set of principles predicting many observations
- c. A method of turning conceptual variables into measured variables
- d. A method of understanding research hypotheses

Answer: c ; Easy

17. An integrated set of principles predicting many of the observations in a given domain is termed a(n) _____.

- a. operational definition
- b. theory
- c. law
- d. hypothesis

Answer: b; Easy

18. Which of the following is NOT one of the characteristics of a good theory?

- a. A good theory is general.
- b. A good theory is complex.
- c. A good theory can be falsified.
- d. A good theory inspires future research.

Answer: b; Moderate

19. A reviewer believes that a researcher's theory is unnecessarily complicated. She believes that the theory is not _____.

- a. objective
- b. parsimonious
- c. empirical
- d. general

Answer: b; Moderate

20. One of the most frequent criticisms of psychodynamic theory is that it cannot be disproved; that is, the theory is not _____.

- a. parsimonious
- b. general
- c. replicable
- d. falsifiable

Answer: d; Moderate

21. Which of the following alternatives best expresses the relationship between *theory* and *data*?

- a. Theory and data are unrelated
- b. Theory and data are the same
- c. Theory and data inform each other
- d. Data cannot explain theory

Answer: c; Difficult

22. Which of the following sequences correctly orders types of scientific predictions or explanations in order of increasing generality?

- a. hypothesis → theory → law
- b. theory → hypothesis → law
- c. law → hypothesis → theory
- d. theory → law → hypothesis

Answer: a; Moderate

23. Which of the following concepts is correctly matched with its definition?

- a. hypothesis – a statement translating a conceptual definition into a measured definition
- b. law – an attribute that can assume different values
- c. variable – a general, overarching principle
- d. theory – an integrated framework explaining the data in a given domain

Answer: d; Moderate

24. A *hypothesis* is best defined as a(n):

- a. specific prediction concerning the relationship between variables
- b. specification of a variable in terms of the procedures that will be used to measure it
- c. broad, general explanation of the phenomenon of interest
- d. behavior, event, or other characteristic that can assume different values

Answer: a; Easy

25. “Opposites attract.” “Birds of a feather flock together.” These aphorisms are:

- a. hypotheses
- b. variables
- c. theories
- d. laws

Answer: a; Easy

26. A behavior, event, or other characteristic that can take on different values is termed a(n) _____.

- a. law
- b. variable
- c. theory
- d. operational definition

Answer: b; Easy

27. Helena proposes that the more impulsive a student is, the more likely he or she will be to change answers on a multiple-choice test. The variable(s) in this statement is/are:

- a. student and impulsivity
- b. student and answer-changing
- c. impulsivity and answer-changing
- d. student, impulsivity, and answer-changing

Answer: c; Difficult

28. Abstract ideas forming the basis of research hypotheses are termed:

- a. empirical variables
- b. conceptual variables
- c. measured variables
- d. operational definitions

Answer: b; Moderate

29. Psychologists operationalize the _____ in a _____.

- a. groups; experiment
- b. variables; hypothesis
- c. samples; population
- d. hypotheses; theory

Answer: b; Moderate

30. When asked to define ‘popularity,’ Brianna says, “It’s when everyone likes you.” When asked the same question, Chrissy says, “It’s the number of friends you have.” How do the two girls’ definitions differ?

- a. Brianna's is an operational definition; Chrissy's is not.
- b. Brianna's is a procedural definition; Chrissy's is not.
- c. Chrissy's is an operational definition; Brianna's is not.
- d. Chrissy's is a conceptual definition; Brianna's is not.

Answer: c; Difficult

31. Which of the following is an operational definition of "happiness"?

- a. A feeling of joy or contentment
- b. The number of times an individual smiles in an hour
- c. An individual's self-rating on a 10-point happiness scale
- d. Both B and C are operational definitions of happiness.

Answer: d; Moderate

32. Regarding operational definitions, which of the following statements is MOST accurate?

- a. For a given conceptual variable, there is usually just one operational definition.
- b. For a given conceptual variable, there is a single best operational definition.
- c. For a given conceptual variable, many operational definitions are usually possible.
- d. Some conceptual variables cannot be translated into operational definitions.

Answer: c; Moderate

33. Ethical codes regulating the conduct of research have been developed by:

- a. the federal government
- b. scientific organizations
- c. individual colleges and universities
- d. both A and B

Answer: d; Moderate

34. Which of the following is NOT a requirement of ethical research on human participants?

- a. Participants must be protected from physical and mental harm.
- b. Participants must be assured that their participation is voluntary.
- c. Participants must be aware of the general procedures involved before the study begins.
- d. Participants must be fully informed of the purpose of the research before it begins.

Answer: d; Moderate

35. Psychologists disagree on whether _____ is ever permissible in the conduct of psychological research.

- a. deception
- b. informed consent
- c. debriefing
- d. free choice

Answer: a; Easy

36. Which of the following statements is true regarding the use of deception in psychological research?

- a. It is used in all scientifically valid research.
- b. It may be permissible, as long as alternatives are considered.
- c. It is only used in research on biological explanations of behavior
- d. It is no longer permissible in psychological research.

Answer: b; Moderate

37. Informed consent includes which of the following?

- a. a detailed explanation of the study and its procedures
- b. a statement of the potential risks of participating in the study
- c. an assurance that participation is completely voluntary
- d. A, B, and C

Answer: d; Easy

38. Dr. O'Connor is telling his participants before he begins the experiment that their participation is completely voluntary and that they can stop taking part at any time. Dr. O'Connor is:

- a. debriefing his participants
- b. obtaining informed consent
- c. explaining the research hypothesis
- d. deceiving his participants

Answer: b; Easy

39. When a researcher debriefs her participants, she

- a. provides a detailed explanation of the hypotheses and goals of the study.
- b. tells them they can stop taking part at any time.
- c. assures them that their data will remain confidential.
- d. outlines what is going to occur in the study.

Answer: a; Easy

40. Which of the following best defines *falsifiable*?

- a. Empirically incorrect
- b. Inconsistent with prior data
- c. Measureable and able to be shown to be incorrect
- d. Specific and objective

Answer: c; Easy

41. Dr. O'Malley is telling his participants before he begins the experiment that their participation is completely voluntary and that they can stop taking part at any time. Dr. Quick is providing a detailed explanation to participants who have just completed a study. Which of the following statements is TRUE?

- a. Dr. O'Malley is obtaining informed consent from his participants. Dr. Quick is debriefing her participants.
- b. Dr. O'Malley is debriefing his participants. Dr. Quick is obtaining informed consent from her participants.
- c. Both Dr. O'Malley and Dr. Quick are obtaining informed consent from their participants.
- d. Both Dr. O'Malley and Dr. Quick are debriefing their participants.

Answer: a; Easy

Which of the following sequences best reflects the order of events in a typical experimental session?

- a. informed consent → experiment → debriefing
- b. informed consent → debriefing → experiment
- c. debriefing → informed consent → experiment
- d. experiment → informed consent → debriefing

Answer: a; Easy

42. Trent, a doctoral student in psychology, is preparing his dissertation proposal. The institutional review board (IRB) at his university will approve his research if they determine that

- a. participants will experience no risk or discomfort during the research.
- b. the scientific benefit of the research outweighs the risk to the participants.
- c. participants are fully informed of the research hypotheses of the study before it begins.
- d. participants are deceived about the goals of the study.

Answer: b; Moderate

43. Which of the following statements is true regarding the use of animal subjects in psychological research?

- a. Most psychologists believe that it is wrong to conduct research on animals.
- b. The use of animal subjects has fewer ethical considerations than does the use of human participants.
- c. Psychologists attempt to minimize the pain and discomfort of research animals.
- d. Animal research is no longer allowed in psychology.

Answer: c; Moderate

44. A person who argues that animals should never be used in psychological research may be forgetting which of the following?

- a. The fact that no research is now conducted on animals in psychology
- b. That animals are never harmed in psychological research
- c. That animals are more important than human beings
- d. That research with animals provides benefits that improve human lives.

Answer: d; Easy

TRUE-FALSE QUESTIONS;

45. Applied research answers fundamental questions about behavior.

Answer: F

Moderate

46. The more complicated a theory, the better it is.

Answer: F

Easy

47. Research can be empirical without necessarily being objective.

Answer: T

Difficult

48. The statement, “Frustration produces aggression” is a hypothesis.

Answer: T

Moderate

49. An abstract notion such as “prejudice” is called a measured variable.

Answer: F

Moderate

50. Deception is no longer permitted in psychological research.

Answer: F

Easy

51. Informed consent is obtained at the beginning of a research session

Answer: T

Easy

52. Debriefing involves a full explanation of the purposes and procedures of the research.

Answer: T

Easy

FILL-IN-THE-BLANK QUESTIONS

53. Statements based on systematic data collection and analysis are termed _____.

Answer: empirical; Moderate

54. _____ are more specific than laws, but more general than hypotheses.

Answer: Theories; Easy

55. Alyssa predicts that caffeine will improve her participants’ performance on a visual tracking task. Alyssa has formed a(n) _____.

Answer: hypothesis; Easy

56. “Solve for x ,” states an eighth-grade mathematics text. Because x can assume different values, it is termed a(n) _____.

Answer: variable; Easy

57. “*Drug use*.” “*Depression*.” These abstract constructs are called _____ variables.

Answer: conceptual; Moderate

58. A(n) _____ states how a conceptual variable is turned into a measured variable.

Answer: operational definition; Moderate

59. Sometimes, to prevent participants' expectations from influencing research results, investigators must engage in _____.

Answer: deception; Moderate

60. Before a study begins, participants must give _____, indicating that they know the potential risks of the study and are aware that their participation is voluntary.

Answer: informed consent; Moderate

61. At the conclusion of an experimental session, Nia tells her participants the purpose of the study and explains the procedures she used. Nia is _____ her participants.

Answer: debriefing; Moderate

ESSAY QUESTIONS:

62. Why do you think that psychology has fewer laws than some of the physical sciences such as physics? In your answer, make explicit reference to some of the challenges of studying psychology described in Chapter 1 of your text.

Difficult

63. Distinguish between a hypothesis and a theory. Provide an example of a hypothesis, along with operational definitions of the variables included in your hypothesis

Difficult

64. Select two of the following aphorisms: (1) *Birds of a feather flock together*; (2) *Opposites attract*; (3) *The more the merrier*; (4) *Two heads are better than one*; (5) *Two's company; three's a crowd*. Translate each aphorism that you select into a testable hypothesis. Provide operational definitions of each of the variables in each hypothesis.

Difficult

65. Discuss three ethical concerns that psychologists must consider in the design and conduct of research with human participants.

Difficult

SECTION 2

MULTIPLE-CHOICE QUESTIONS:

66. Which of the following is the goal of *descriptive research*?

- a. To assess the validity of a measurement
- b. To assess the relationships among variables
- c. To assess the current state of affairs
- d. To assess the causal influence of one or more manipulations

Answer: c; Easy

67. Which of the following is the goal of *correlational research*?

- a. To assess the validity of a measurement
- b. To assess the relationships among variables
- c. To assess the current state of affairs
- d. To assess the causal influence of one or more manipulations

Answer: b; Easy

68. Which of the following is the goal of *experimental research*?

- a. To assess the validity of a measurement
- b. To assess the relationships among variables
- c. To assess the current state of affairs
- d. To assess the causal influence of one or more manipulations

Answer: d; Easy

69. Which of the following alternatives correctly matches a research design with its goal?

- a. descriptive research – assesses the causal influence of one or more manipulations
- b. experimental research – assesses the relationships among variables
- c. correlational research – provides an assessment of the current state of affairs
- d. experimental research – assesses the causal influence of one or more manipulations

Answer: d; Moderate

70. Dr. Allen's research examines the relationships among variables. Dr. Berg's research measures the influence of the manipulation of several variables. Dr. Allen is conducting _____ research, whereas Dr. Berg is conducting _____ research.

- a. descriptive; correlational
- b. experimental; descriptive
- c. descriptive; experimental
- d. correlational; experimental

Answer: d; Moderate

71. Which alternative correctly pairs a research design with a disadvantage?

- a. experimental – may be unethical if participants do not know they are being observed
- b. correlational – may be expensive and time-intensive
- c. descriptive – does not assess the relationships among variables
- d. correlational – many important variables cannot be manipulated

Answer: c; Difficult

72. Case studies, naturalistic observation, and surveys are all examples of _____ research methods.

- a. observational
- b. descriptive
- c. experimental
- d. correlational

Answer: b; Easy

73. Dr. Girard is conducting a detailed examination of a patient with dissociative identity disorder. Dr. Girard is undertaking:

- a. a survey
- b. experimental research
- c. a case study
- d. naturalistic observation

Answer: c; Easy

74. Which of the following prominent psychologists developed his theories primarily through using case studies?

- a. James
- b. Watson
- c. Skinner
- d. Freud

Answer: d; Easy

75. Which of the following researchers is conducting a case study?

- a. Dr. Henriette, who is measuring how fast a group of students can respond to a stimulus.
- b. Dr. Innis, who is examining the tactile perception of a blind woman
- c. Dr. Jenner, who is observing children on a playground
- d. Dr. Kulik, who is combing through newspaper stories on serial killers

Answer: b; Easy

76. Survey is to case study as _____ is to _____.

- a. experimental; descriptive
- b. descriptive; experimental
- c. one participant; many participants
- d. many participants; one participant

Answer: d; Difficult

77. Fidelma is undertaking survey research. Which of the following is she probably doing?

- a. Recording the behaviors of sea lions in their natural habitat
- b. Observing the problem solving strategies of an extremely gifted middle-school girl
- c. Comparing students' performance on abstract and concrete versions of problems
- d. Asking a sample of students a series of questions about their sexual attitudes and behaviors

Answer: d; Easy

78. Dr. Evans prepares a set of questions to ask college students about their drinking behavior and their attitudes toward alcohol. Dr. Evans is undertaking:

- a. A survey
- b. Experimental research
- c. Naturalistic observation
- d. A case study

Answer: a; Easy

79. Which of the following statements BEST expresses the relationship between a sample and a population?

- a. A sample includes a population.
- b. A population includes a sample.
- c. A population is similar to a sample.
- d. A sample is completely separate from a population.

Answer: b; Moderate

80. At a DUI checkpoint, some cars are stopped at random; many others are not stopped. Using the terminology of psychological research, the cars that are stopped may be considered a _____ of all the cars that pass by the checkpoint.

- a. sample
- b. population
- c. segment
- d. subgroup

Answer: a; Moderate

81. Amy is conducting a survey of dating attitudes and behaviors among young adults as part of her masters' thesis work. Amy distributes questionnaires to 200 randomly selected students enrolled in an introductory psychology course at her university. The 200 students constitute Amy's _____. The people of whom she assumes her results will generalize are termed the _____.

- a. control group; population
- b. experimental group; population
- c. population; sample
- d. sample; population

Answer: d; Moderate

82. Naturalistic observation entails which of the following?

- a. The systematic, detailed study of a single individual
- b. Examining existing records, such as census documents
- c. Asking a sample of individuals a set of questions
- d. Examining behavior in the setting in which it typically occurs

Answer: d; Easy

83. DeAndre is recording instances of physical aggression among children in a schoolyard at recess. DeAndre is undertaking:

- a. naturalistic observation
- b. experimental research
- c. a survey
- d. a case study

Answer: a; Easy

84. Valentina is engaged in naturalistic observation. In which of the following projects is she most likely engaged?

- a. Asking a sample of college students a set of questions about tendency to become angry in different situations
- b. Observing interactions between subordinates and their supervisors in a large corporate office
- c. Studying the social behaviors of an autistic boy
- d. Examining crime statistics from the Department of Justice to see if the rate of property crimes is related to the rate of violent crimes

Answer: b; Easy

85. Which alternative correctly describes one of the descriptive research techniques mentioned in your text?

- a. naturalistic observation – involve interviews or questionnaires
- b. case study – entail the deliberate manipulation of one or more variables
- c. survey – provide systematic records of an individual's behavior
- d. naturalistic observation – involves the examination of everyday events

Answer: d; Moderate

86. Descriptive statistics:

- a. allow predictions beyond a data set
- b. summarize a set of data
- c. indicate how dispersed a set of data is around the mean
- d. show how two or more variables are related

Answer: b; Easy

87. Amanda selects a sample of college students. She obtains the students' scores on several personality scales, as well as on a test of creativity. Amanda wishes to summarize her sample's performance on the creativity test. She therefore computes _____ statistics.

- a. descriptive
- b. inferential
- c. correlational
- d. deviation

Answer: a; Moderate

88. Bell-shaped distributions of data are termed _____ distributions.

- a. curvilinear
- b. symmetrical

- c. representative
- d. normal

Answer: d; Easy

89. Which of the following is NOT a measure of central tendency?

- a. mean
- b. mode
- c. median
- d. range

Answer: d; Moderate

90. In a picture memory experiment, Val computes the average percent-correct picture recognition of her sample of participants. Val has computed a measure of _____.

- a. dispersion
- b. statistical significance
- c. central tendency
- d. correlation

Answer: c; Moderate

91. Measures of central tendency indicate:

- a. how spread out the data is
- b. the “middle” of the data
- c. the relationships in the data
- d. the range of the data

Answer: b; Moderate

92. Which alternative correctly pairs a measure of central tendency with a brief description?

- a. mean – the most common score in the data set
- b. median – the middle score in a data set
- c. mode – the arithmetic average of the scores in the data set
- d. median – the average distance of the scores from the mean

Answer: b; Difficult

93. Consider the following small data set: 4, 5, 5, 6, 6, 6, 7, 9, 9, 10. Which alternative below correctly identifies the mean, median, or mode of the data set?

- a. median – 6.7
- b. mean – 4
- c. mode – 9
- d. median – 6

Answer: d; Difficult

94. Consider the following small data set: 4, 5, 5, 6, 6, 8, 7, 9, 9, 9. Which alternative below correctly identifies the mean, median, or mode of the data set?

- a. median – 5.5
- b. mean – 4
- c. mode – 9

- d. mode – 6.7
 - e. median – 6.5
- Answer: c; Difficult

95. Heather selects a sample of introductory psychology students to participate in her survey research. Most of the students in the sample are 18 to 20 years of age; however, there are a few older students in their 50s among her participants. To capture the central tendency of her participants' ages, Heather might consider reporting the _____ rather than the _____.

- a. mean; median
- b. median; mean
- c. median; mode
- d. mode; median

Answer: b; Difficult

96. Which of the following is true regarding the sensitivity of measures of central tendency to extreme scores?

- a. Neither the mean nor the median is sensitive to extreme scores.
- b. The mean and the median are both equally sensitive to extreme scores.
- c. The mean is more sensitive to extreme scores than is the median.
- d. The mean is less sensitive to extreme scores than is the median.

Answer: c; Difficult

97. Why do we more often hear references to the median family income in the U.S. than to the mean family income in the U.S?

- a. The median is the most common income.
- b. Family incomes are very similar across the U.S., making the mean difficult to compute.
- c. Income data is highly influenced by a small number of families making extremely high incomes.
- d. There are too many families in the U.S. for the mean to be computed.

Answer: c; Difficult

98. A particular county includes several affluent communities in which home values are extremely high. Which of the following is the BEST prediction we can make regarding the mean and median home values in the county as a whole?

- a. The mean and median home values are probably the same.
- b. The mean and median home values are different.
- c. The median home value is lower than the mean home value.
- d. The median home value is higher than the mean home value.

Answer: c; Difficult

99. Average is to _____ as most frequent is to _____.

- a. mean; mode
- b. mean; median
- c. median; mode
- d. mean; mean

Answer: a; Moderate

100. Defending his senior honors thesis, Bryan displays a pie chart. The chart shows the number of his participants who are enrolled in each of the colleges at his university. The pie chart should allow his audience to identify the _____ of the responses.

- a. mode
- b. mean
- c. median
- d. standard deviation

Answer: a; Difficult

101. Which of the following is a measure of variability?

- a. median
- b. correlation coefficient
- c. mode
- d. mean
- d. range

Answer: e; Moderate

102. “The average was 75,” explains Dr. Morales, handing back the semester’s first midterm. The lowest score was 32, and there were several in the 40s. But I had some 95s, 96s, and even a 98 – so it’s not like it’s impossible to do well.” Handing back the second midterm, Dr. Morales notes, “The average was 75 again. There were a few in the low 60s, but I got a bunch in the high 80s and into the 90s. It’s looking better!” Which of the following statements is TRUE?

- a. The means were the same on the two tests, but the standard deviation was lower on the first than on the second.
- b. The means were the same on the two tests, but the standard deviation was higher on the first than on the second.
- c. The means were the same on the two tests, but the range was lower on the first test.
- d. The means and standard deviations were the same on the two tests.

Answer: b; Difficult

103. The difference between the highest and the lowest score in a data set is termed the _____.

- a. correlation coefficient
- b. mode
- c. range
- d. standard deviation

Answer: c; Moderate

104. The range is sensitive to extreme scores. In this way, it is similar to the _____, a measure of central tendency.

- a. mean
- b. standard deviation
- c. median

d. mode

Answer: a; Moderate

105. Irving has noticed a pattern: The more alcohol people drink, the more aggressive they seem to be. Which research method is aimed at verifying a relationship between two variables?

- a. Naturalistic observation
- b. Case study
- c. correlational research
- d. descriptive research

Answer: c; Moderate

106. Which term is most nearly synonymous with the term *correlation*?

- a. association
- b. cause
- c. observation
- d. influence

Answer: a; Easy

107. Predictor variable is to outcome variable as _____ is to _____.

- a. population; sample
- b. sample; population
- c. control group; experimental group
- d. independent variable; dependent variable

Answer: d; Difficult

108. A scatterplot is a visual representation of:

- a. the statistical significance of the results
- b. the relationship between two variables
- c. the variability in the data
- d. the central tendency of the data

Answer: b; Moderate

109. Examining her data, Nikki observes that as job stress scores increase, marital satisfaction scores decrease. That is, there is a _____ relationship between job stress and marital satisfaction in Nikki's data.

- a. positive
- b. perfect
- c. negative
- d. curvilinear

Answer: c; Moderate

110. Verna found a positive correlation between self-reported alcohol and drug use and sick days taken in a study of white-collar workers. A graph of her results would show a(n):

- a. negatively-sloped line

- b. positively-sloped line
- c. horizontal line
- d. U-shaped curve

Answer: b; Moderate

111. Each alternative below identifies a potential relationship between two variables. Which alternative most likely misidentifies the type of relationship between the two variables it names?

- a. positive -- self-esteem and academic achievement
- b. negative – physical fitness and body-mass index
- c. positive – job satisfaction and absenteeism
- d. negative -- alcohol use and GPA

Answer: c; Difficult

112. Which of the following techniques would be used to predict a single outcome variable from more than one predictor variable?

- a. Pearson correlation
- b. Scatter plot
- c. Multiple regressions
- d. Descriptive statistics

Answer: c; Moderate

113. The number of ice cream cones that are eaten on a given day is correlated with the number of people who are wearing sweaters on a given day. Which of the following probably explains the correlations

- a. sweater wearing causes ice cream eating
- b. ice cream eating causes sweater wearing
- c. ice cream eating and sweater wearing are independent
- d. there is a common-causing variable

Answer: d; Moderate

114. The number of violent TV shows that a child watches is positively correlated with the aggressiveness of the child's play. Why might this be?

- a. Viewing violent TV causes aggressive behavior
- b. Aggressive behavior causes viewing violent TV
- c. There is a third common-causal variable that creates the correlation
- d. A, B, or C may be correct but the correlation cannot tell us which one is correct.

Answer: d; Moderate

115. Anderson and Dill (2000) studied the effects of playing violent video games on white noise blasts in a laboratory study. In this study the type of video game was which of the following?

- a. The common-causal variable
- b. The independent variable
- c. The dependent variable
- d. The control variable

Answer: b; Moderate

116. Anderson and Dill (2000) studied the effects of playing violent video games on white noise blasts in laboratory study. In this study the white noise was which of the following?

- a. The common-causal variable
- b. The independent variable
- c. The dependent variable
- d. The control variable

Answer: c; Moderate

117. A researcher argues that the number of violent TV shows that a child watches is positively correlated with the aggressiveness of the child's play due to the fact that the discipline style of the parents causes both TV viewing and aggressive play. The researcher believes that parental discipline style is which of the following?

- a. A common-causal variable
- b. An independent variable
- c. An outcome variable
- d. An independent variable

Answer: a; Moderate

118. Which of the following specifies the correct relationship between self-esteem and academic achievement?

- a. A positive correlation
- b. A negative correlation
- c. No correlation
- d. A spurious correlation

Answer: a; Moderate

119. Which of the following specifies the correct relationship between study time on a task and memory errors on the task?

- a. A positive correlation
- b. A negative correlation
- c. No correlation
- d. A curvilinear relationship

Answer: b; Moderate

120. Dr. Brandt is examining the relationship between how challenging participants say their jobs are and how much time they say they spend surfing the Web at work. Dr. Brandt is likely to compute a(n) _____.

- a. significance index
- b. association score
- c. standard deviation
- d. correlation coefficient

Answer: d; Easy

121. The correlation coefficient ranges from:

- a. -100 to 100
- b. -1.00 to 1.00
- c. 0 to 1
- d. 0 to 100

Answer: b; Easy

122. “Okay. What does a correlation coefficient tell us?” Zoe asks the members of her psychology study group. “The strength of a relationship between two variables,” answers Yvonne. “The direction of the relationship between two variables,” adds Will. “The range of the scores in a set of data,” offers Vera. Who’s right?

- a. Yvonne
- b. Will
- c. Vera
- d. Both Yvonne and Will are right.

Answer: d; Moderate

123. The direction of the relationship between two variables is given by a correlation coefficient’s _____; the strength of the relationship is given by the coefficient’s _____.

- a. absolute value; size
- b. sign; absolute value
- c. sign; size
- d. absolute value; sign

Answer: b; Difficult

124. Between which pair of values is one most likely to find a positive correlation?

- a. alcohol consumption and GPA
- b. GPA and height
- c. GPA and amount of studying
- d. GPA and depression

Answer: c; Moderate

125. A researcher finds a correlation of $-.31$. Which pair of variables is the researcher most likely investigating?

- a. depression and alcohol use
- b. alcohol consumption and GPA
- c. GPA and height
- d. GPA and amount of studying

Answer: b; Moderate

126. Which of the following correlation coefficients represents the strongest relationship between two variables?

- a. $-.75$
- b. $.00$

c. .30

d. .60

Answer: a; Difficult

127. Which of the following sequences of correlation coefficients correctly arranges the relationships between three pairs of two variables in order of increasing strength?

a. -.60, .10, .50

b. -.60, -.50, .00

c. .-.60, .50, .10

d. .10, .50, -.60

Answer: d; Difficult

128. Among a sample of middle-school students, Dr. Dyer finds a correlation of -.60 between the time children spend outside each week and their scores on an index of depression. Each of the following interpretations is consistent with this data EXCEPT:

a. Depression prevents children from spending time outside.

b. Spending time outside prevents children from becoming depressed.

c. A personality trait, such as openness to experience, is related both to spending time outside and to susceptibility to depression.

d. There is a perfect relationship between spending time outside and depression.

Answer: d; Difficult

129. Dr. Swanson finds a correlation of .45 between scores on a measure of job satisfaction and scores on a measure of job performance. Which of the following might Dr. Swanson legitimately conclude on the basis of this coefficient alone?

a. Higher job satisfaction leads to improved job performance.

b. Good job performance produces high job satisfaction.

c. As job satisfaction increases, so does job performance.

d. Personality traits such as conscientiousness yield both job satisfaction and high job performance.

Answer: c; Moderate

130. Dr. Ingram deliberately systematically manipulated the number of items on a list and later measured participants' recall of the items. Dr. Ingram conducted a(n) _____ study.

a. correlational

b. observational

c. descriptive

d. experimental

Answer: d; Easy

131. In an experiment, the _____ variable is deliberately manipulated by the researcher.

a. dependent

b. independent

c. experimental

d. predictor

Answer: b; Easy

132. In an experiment, the _____ variable is measured by the researcher.

a. dependent

b. independent

c. spurious

d. outcome

Answer: b; Easy

133. Professors Chase and Sanborn are conducting an experiment on the effects of caffeine on memory. Participants are randomly assigned to a caffeine or a no-caffeine group and their recall of items on a word list is later assessed. Which pair correctly identifies a variable in this experiment?

a. caffeine—dependent variable

b. caffeine—-independent variable

c. caffeine – predictor variable

d. word recall—independent variable

Answer: b; Moderate

134. Professors Chase and Sanborn are conducting an experiment on the effects of caffeine on memory. Participants are randomly assigned to a caffeine or a no-caffeine group and their recall of items on a word list is later assessed. Which pair correctly identifies a variable in this experiment?

a. experimental variable; memory

b. independent variable; caffeine

c. outcome variable; caffeine

d. dependent variable; caffeine

Answer: b; Moderate

135. Professors Chase and Sanborn are conducting an experiment on the effects of caffeine on memory. Participants are randomly assigned to a caffeine or a no-caffeine group and their recall of items on a word list is later assessed. Which pair below correctly names and identifies the variables in this experiment?

a. word recall—outcome variable; caffeine—predictor variable

b. word recall—independent variable; caffeine—dependent variable

c. word recall—dependent variable; caffeine—independent variable

d. word recall—experimental variable; caffeine—control variable

Answer: c; Moderate

136. The purpose of random assignment is to:

a. combine the results of a number of similar studies

b. determine how likely it is that the results of a manipulation were due to chance

c. ensure that participant characteristics are equivalent across conditions

d. determine whether two variables are related

Answer: c; Moderate

TRUE-FALSE QUESTIONS

137. The aim of descriptive research is to discover relationships among variables.

Answer: F; Easy

138. A sample contains a population.

Answer: F; Moderate

139. The mean is the most common measure of central tendency.

Answer: T; Easy

140. The mode is the score in the center of a data distribution.

Answer: F; Difficult

141. The relationship between two variables may be depicted using a scatterplot

Answer: T; Easy

142. The height and weight of people are positively correlated.

Answer: T; Easy

143. In an experiment, the independent variable is manipulated by the experimenter.

Answer: T; Easy

FILL-IN-THE-BLANK QUESTIONS

144. _____ research includes naturalistic observation, survey research, and the case study method.

Answer: Descriptive; Moderate

145. Dr. Leblanc is examining interactions among primates in the wild; he does not intervene. Dr. Leblanc is performing _____.

Answer: naturalistic observation; Moderate

146. The Balanced Inventory of Desirable Responding asks respondents 20 questions about their attitudes and behavior. It is probably most often used in _____ research.

Answer: survey; Moderate

147. A _____ is a representative subset of a population.

Answer: sample; Moderate

148. The mean, median, and mode are measures of _____.

Answer: central tendency; Moderate

149. Consider the following data set: 3, 5, 6, 7, 8, 8, 10. The _____ is 7.

Answer: median; Difficult

150. The mean is _____ affected by extreme values than is the median.

Answer: more ; Moderate

151. The youngest participant in Dr. Cooper's memory experiment was 17; the oldest was

62. The _____ of these data is 45.

Answer: range; Moderate

152. A _____ graphically represents participants' scores on two variables simultaneously.

Answer: scatterplot; Moderate

153. Freshman GPA is probably _____ correlated with high-school GPA.

Answer: positively; Easy

154. In an experiment, a researcher manipulates participants' exposure to a stimulus.

Exposure is a(n) _____ variable in this example.

Answer: independent; Easy

ESSAY QUESTIONS:

155. Select and describe a behavioral or mental phenomenon of particular interest to you.

Describe how one might use descriptive, correlational, and experimental techniques to shed light on the phenomenon.

Difficult

156. Define the mean, median, and mode. Compute each of these measures for this set of scores: {10, 20, 20, 30, 30, 30, 50, 60, 70, 70}.

Difficult

157. Madeline selects a large sample of college undergraduates. She obtains their scores on several personality scales; this data is normally distributed. The great majority of her sample are 18-20 years old. Among her participants, though, are several students in their 40s and 50s. In addition to indicating their age, participants selected their ethnicity from among several categories. Suggest how Madeline might use the mean, median, and mode appropriately in performing a descriptive statistical analysis of her data.

Difficult

158. A researcher finds a correlation of $-.45$ between the amount of stress participants report having experienced recently and participants' scores on an index of physical health. What does this mean? Provide a one-sentence interpretation of this correlation coefficient. Provide three distinct cause-and-effect mechanisms that might explain this correlation.

Difficult

159. Suggest (a) two variables that are most likely positively correlated; (b) two variables that are most likely negatively correlated; and (c) two variables that are probably uncorrelated. Portray the relationship between each pair of variables graphically, making sure to label all axes correctly.

Difficult

160. How is it that the experimental method allows researchers to draw cause-and-effect conclusions? Identify the critical elements of the experimental method and explain how each helps enable the development of valid causal conclusions.

Difficult

SECTION 3

MULTIPLE-CHOICE QUESTIONS:

161. Which alternative correctly pairs a threat to the validity of research with a definition?
- a. construct validity; the measured variables do not relate to the conceptual variables
 - b. external validity; the dependent variable reflects the influence of a confounding variable
 - c. statistical conclusion validity; the results do not generalize to other conditions or participant groups
 - d. internal validity; the results do not generalize to other conditions or participant groups
- Answer: a; Moderate

162. Which of the following describes *internal validity*?
- a. The measured variables relate to the conceptual variables
 - b. The results generalize to other conditions or participant groups
 - c. The independent variable causes the dependent variable
 - d. The measured variables cause the conceptual variables
- Answer: c; Moderate

163. Which of the following describes *external validity*?
- a. The measured variables relate to the conceptual variables
 - b. The results generalize to other conditions or participant groups
 - c. The independent variable causes the dependent variable
 - d. The measured variables cause the conceptual variables
- Answer: b; Moderate

164. Which alternative correctly pairs a threat to the validity of research with an example?
- a. external validity -- Dr. daSilva fails to support his results with any statistical tests.
 - b. internal validity -- Dr. Abdallah uses a survey to investigate the personality trait of optimism. However, the questionnaire she uses actually measures a different trait than optimism.
 - c. statistical conclusion validity -- Dr. Carvalho's results do not extend to participants of different cultural backgrounds.
 - d. construct validity -- Dr. Abdallah uses a survey to investigate the personality trait of optimism. However, the questionnaire she uses actually measures a different trait than optimism.
- Answer: d; Difficult

165. Dr. DeJong randomly selects 100 individuals to participate in an experiment. She then randomly assigns the participants to several different conditions. With reference to the potential threats to validity described in your text, what are the goals of random selection and random assignment, respectively?
- a. Both random selection and random assignment protect the external validity of the research.
 - b. Random selection protects the external validity of the research. Random assignment protects its internal validity.

- c. Random selection protects the external validity of the research. Random assignment protects its construct validity.
- d. Random selection protects the construct validity of the research. Random assignment protects its internal validity.

Answer: b; Difficult

166. A measure is considered reliable if:

- a. it relates to the conceptual variable of interest
- b. it yields consistent scores
- c. it yields statistically significant results
- d. it is objective

Answer: b; Moderate

167. “Every time I take it, it tells me something different!” complains your friend, turning away from the online personality quiz she just completed. Your friend is complaining about the test’s _____.

- a. construct validity
- b. external validity
- c. reliability
- d. statistical significance

Answer: c; Moderate

168. The extent to which a measure reflects the conceptual variable of interest is termed its _____.

- a. statistical significance
- b. external validity
- c. reliability
- d. construct validity

Answer: d; Moderate

169. “That’s so not true! This test can’t have anything to do with my ability to attract women!” Ignacio protests. Ignacio is disputing the test’s _____.

- a. external validity
- b. statistical significance
- c. objectivity
- d. construct validity

Answer: d; Moderate

170. Dr. Williams has developed a paper-and-pencil test to assess fear of heights. He gives the test to 50 research participants. He finds that scores on the test have a correlation of only .25 with physiological measures of fear. The low correlation suggests that the test may not have which of the following?

- a. Construct validity
- b. Reliability
- c. Internal validity

d. External validity

Answer: a; Moderate

171. Dr. Williams has developed a paper-and-pencil test to assess fear of heights. He gives the test to 50 research participants. Two months later, participants take the paper-and-pencil test again. The correlation between scores on this second paper-and-pencil test and scores on the first paper-and-pencil test is 0.95. This information suggests that Dr.

Williams' test has

a. Construct validity

b. Reliability

c. Internal validity

d. External validity

Answer: b; Moderate

172. A researcher develops a questionnaire to assess the personality trait of impulsivity among adults. In a journal article, she presents evidence that college students tend to get essentially the same score if they take the test twice, 2 months apart. When you look at the sample questionnaire items she included in the article, though, it seems that they relate more to whether a person is sociable, outgoing, and fun than to whether an individual is impulsive. You are questioning the _____ of the researcher's questionnaire.

a. objectivity

b. reliability

c. external validity

d. construct validity

Answer: d; Difficult

173. What does a psychologist usually mean when she says a particular experimental result is 'statistically significant'?

a. The result reflects a large difference between the mean scores in one condition and the mean scores in another.

b. The result is important in a practical sense.

c. The result will allow psychologists to support one theory over alternative theories.

d. The result is unlikely to have occurred solely as a result of chance.

Answer: d; Moderate

174. Variables other than the independent variable on which participants differ are termed _____ variables. They threaten _____ validity.

a. confounding; internal

b. confounding; external

c. confounding; construct

d. spurious; external

Answer: a; Moderate

175. Dr. Ellis performs an experiment to test the hypothesis that alcohol consumption increases verbal aggression. However, the alcohol group contained mostly men, whereas

the no-alcohol group contained mostly women. In this experiment, gender is a(n) _____ variable.

- a. spurious
- b. confounding
- c. predictor
- d. independent

Answer: b; Moderate

176. In Dr. Suarez' social psychology lab, Dr. Thomas' research assistants are more likely to

unconsciously reinforce aggressive behavior among children who view a violent video film than among children viewing a nonviolent film. Dr. Suarez' research is susceptible to.

- a. experimenter bias
- b. placebo effects
- c. external invalidity
- d. participant bias

Answer: a; Moderate

177. Which of the following is true in a *double-blind experiment*?

- a. The participant knows what condition he or she is in but the experimenter does not.
- b. The experimenter knows what condition the participant is in but the participant does not.
- c. Neither the experimenter nor the participant knows what condition the participant is in.
- d. The experimenter and the participant know what condition the participant is in but they cannot influence the outcome

Answer: c; Easy

178. A pharmaceutical company wishes to test the efficacy of a new drug using a double-blind procedure. Which alternative correctly describes the procedure the company would use?

- a. The research assistants would know which participants were receiving the new drug and which were receiving an inert pill. Each patient would also know which type of pill he or she was taking.
- b. All participants would actually receive an inert pill. Neither the research assistants nor the patients would know this.
- c. The research assistants would know which participants were receiving the new drug and which were receiving an inert pill. Each patient, though, would not know which type of pill he or she was taking.
- d. The research assistants would not know which participants were receiving the new drug and which were receiving an inert pill. Also, each patient would not know which type of pill he or she was taking.

Answer: d; Moderate

179. Among American college students, Dr. Figueredo finds that problem-solving success increases participants' self-esteem scores. His colleague, Dr. Guo, finds the same result among a sample of Chinese students in Hong Kong. Based on this information, which of the following statements is most accurate?

- a. Dr. Guo performed a meta-analysis. His results support the external validity of Dr. Figueredo's research.
- b. Dr. Guo performed a meta-analysis. His results support the internal validity of Dr. Figueredo's research.
- c. Dr. Guo performed a replication. His results support the external validity of Dr. Figueredo's research.
- d. Dr. Guo performed a replication. His results support the internal validity of Dr. Figueredo's research.

Answer: c; Moderate

180. Which of the following alternatives correctly pairs a research strategy with the type of validity it is most likely intended to assess?

- a. performing a replication; statistical conclusion validity
- b. completing a meta-analysis; construct validity
- c. using a double-blind procedure; internal validity
- d. conducting tests of statistical significance; construct validity

Answer: c; Difficult

181. Iyesha reads a journal article reporting a study in which a small sample of women undertook tests of spatial ability at two points during their menstrual cycle. Iyesha conducts a similar study using not only spatial ability but also verbal ability tests. In addition, Iyesha tests a larger sample of women. Iyesha performed a _____.

- a. meta-analysis
- b. replication
- c. significance test
- d. control study

Answer: b; Easy

182. Jamal is performing statistical analyses to determine whether the effects of the treatment in his experiment might actually have reflected chance; Kendra is performing an analysis to combine the results of a number of experiments to yield an overall conclusion. Jamal is performing a _____; Kendra, a _____.

- a. meta-analysis; meta-analysis also
- b. significance test; significant test as well
- c. significance test; replication
- d. significance test; meta-analysis

Answer: d; Moderate

183. Which alternative best describes the purpose of meta-analyses with respect to establishing the validity of research?

- a. Meta-analyses counteract experimenter bias, allowing researchers to protect the internal validity of a study.
- b. Meta-analyses repeat existing research, allowing researchers to evaluate the internal validity of a study.
- c. Meta-analyses summarize the results of existing studies, allowing researchers to evaluate the internal validity of a piece of research.

- d. Meta-analyses summarize the results of existing studies, allowing researchers to evaluate the external validity of a piece of research.

Answer: d; Difficult

TRUE-FALSE QUESTIONS;

184. A measure is reliable if it adequately assesses the intended conceptual variable.

Answer: F; Moderate

185. When psychologists say that a result is significant, they mean that it is important.

Answer: F; Moderate

186. The point of replication is to evaluate a study's external validity.

Answer: T; Moderate

187. Double-blind procedures are aimed at eliminating experimenter bias.

Answer: T; Moderate

FILL-IN-THE-BLANK QUESTIONS

188. A _____ outcome is not due to chance.

Answer: significant; Moderate

189. _____ variables make it impossible to attribute the effect of an experiment to the independent variable.

Answer: Confounding; Moderate

190. Miranda is statistically combining the results of all the published studies on the effects of the presence of a weapon on eyewitness accuracy. Miranda is performing a(n) _____.

Answer: meta-analysis; Moderate

191. In a test of a new antianxiety medication, participants are given either the medication or a placebo; the personnel administering the study, moreover, do not know which participants receive the medication and which receive the placebo. This experiment is a(n) _____ study.

Answer: double blind; Moderate

ESSAY QUESTIONS:

192. Distinguish between internal and external validity. Identify two potential threats to internal validity and suggest how researchers might counteract these threats. Describe at least one way that psychologists can establish the external validity of a research study.

Difficult

193. Discuss several considerations one might keep in mind when evaluating the validity of websites.

Difficult