

1. _____ involves making direct observations of the world, whereas _____ involves relying on assumptions and beliefs about the world.
 - A) Methodology; empiricism
 - B) Dogmatism; empiricism
 - C) Empiricism; dogmatism
 - D) Empiricism; methodology

2. The belief that accurate knowledge of the world requires observations of it is called:
 - A) empiricism.
 - B) methodology.
 - C) dogmatism.
 - D) pragmatism.

3. The belief that one can obtain accurate knowledge about the causes of human behaviour by observing people behaving in different situations exemplifies:
 - A) pragmatism.
 - B) dogmatism.
 - C) empiricism.
 - D) parsimony.

4. Margot wonders if people behave more aggressively when there is a full moon. To attempt to find out, she categorizes arrest records and emergency room admissions by the cycle of the moon. Margot is taking a(n) _____ approach to the question.
 - A) empirical
 - B) dogmatic
 - C) hypothetical
 - D) deductive

5. Throughout most of human history, people have tended to trust _____ to answer important questions.
 - A) logic
 - B) science
 - C) authority
 - D) philosophers

6. Holding to Ptolemy's theories that the Earth is the centre of the universe despite contradictory observations made by Galileo upon the invention of the telescope illustrates:
- A) hypothesis testing.
 - B) dogmatism.
 - C) empiricism.
 - D) experimentation.
7. _____ is defined as a tentative explanation of a natural phenomenon.
- A) Theory
 - B) Science
 - C) Hypothesis
 - D) Logic
8. Which statement is an attribute of a good theory?
- A) It can be proven correct.
 - B) It cannot be tested.
 - C) It is no more complicated than necessary.
 - D) It makes unfalsifiable predictions.
9. Which statement is an attribute of a good theory?
- A) It can be proven correct.
 - B) It cannot be tested.
 - C) It does not lead to hypotheses.
 - D) It makes falsifiable predictions.
10. A testable prediction derived from a theory is termed a(n):
- A) experiment.
 - B) operational definition.
 - C) hypothesis.
 - D) valid measure.
11. Dan believes that happiness has little to do with material possessions. He makes a specific prediction that people who win the lottery will not be any happier than they were before winning. This testable prediction is termed a(n):
- A) experiment.
 - B) conclusion.
 - C) theory.
 - D) hypothesis.

12. A set of rules and techniques for observation is termed an empirical:
- A) theory.
 - B) study.
 - C) definition.
 - D) method.
13. Sue becomes tired when it gets really hot outside and Frank becomes angry. Their different reactions to the heat illustrate the challenge of _____ to the study of human behaviour.
- A) confounds
 - B) variability
 - C) complexity
 - D) reactivity
14. Drugs of abuse activate the reward pathway in the brain. This pathway consists of multiple brain structures, many neurotransmitters, and millions of interconnected neurons. Determining the brain changes that underlie the transition from casual drug use to addiction is a difficult process due to the _____ of the system.
- A) reliability
 - B) parsimony
 - C) complexity
 - D) reactivity
15. According to the textbook, what three things make people especially difficult to study?
- A) shyness, moodiness, and unpredictability
 - B) complexity, reactivity, and unpredictability
 - C) variability, reactivity, and complexity
 - D) reactivity, variability, and stubbornness
16. People are difficult to study because they often behave differently when they know that they are being observed, a phenomenon known as:
- A) unpredictability.
 - B) variability.
 - C) complexity.
 - D) reactivity.

17. Cruella would not describe herself as the type of person who cares about animal rights, but she says that she does when filling out a survey for a psychologist. This illustrates that people can be highly _____ when studied.
- A) dogmatic
 - B) variable
 - C) complex
 - D) reactive
18. An operational definition is:
- A) a description of a property in measurable terms.
 - B) the way sciences tend to operate when forming hypotheses.
 - C) the consensus scientists reach when defining their terms.
 - D) a set of rules and techniques for making observations.
19. Describing length as “change in the location of light over time” is an example of a(n):
- A) measurement device.
 - B) casual observation.
 - C) unit of measurement.
 - D) operational definition.
20. Mike wants to know how many licks it takes to get to the centre of his all-day sucker. He tells his friends that “one full gyration of the tongue around the outer surface of the lollipop” is what constitutes a “lick.” In an informal way, Mike is offering a(n):
- A) way to use casual observation to answer his question.
 - B) way to eliminate the reactivity sometimes associated with observation.
 - C) operational definition for the property he wants to measure.
 - D) excuse for eating a lot of candy.
21. A device that can detect the events to which an operational definition refers is a(n):
- A) tool.
 - B) gadget.
 - C) demand characteristic.
 - D) instrument.
22. To correctly measure a specific property of an object, the property must be _____ and _____.
- A) defined; detected
 - B) identified; researched
 - C) real; measurable
 - D) visible; specific

23. Mike wants to know how many licks it takes to get to the centre of his all-day sucker. He tells his friends that “one full gyration of the tongue around the outer surface of the lollipop” is what constitutes a “lick.” Unfortunately, he has not developed a reliable, mechanized way to measure licks. Mike's problem deals with:
- A) definition.
 - B) a third variable.
 - C) falsifiability.
 - D) detection.
24. The tendency for an operational definition to be conceptually related to the underlying property under investigation is referred to as:
- A) reliability.
 - B) validity.
 - C) power.
 - D) measurement.
25. The tendency for a measure to produce the same result whenever it is used to measure the same thing is known as:
- A) consistency.
 - B) power.
 - C) validity.
 - D) reliability.
26. A reliable measure is one that:
- A) tends to produce the same result whenever it is used to measure the same thing.
 - B) tends to differentiate between accurate and inaccurate data.
 - C) compensates for a weak operational definition of a property under study.
 - D) is necessarily an accurate measure of an underlying property.
27. The tendency for a measure to produce different results when the quantity measured changes only slightly is known as:
- A) differentiation.
 - B) power.
 - C) validity.
 - D) reactivity.

28. Ideally, a measurement should have validity, reliability, and _____ in order to be useful to scientists.
- A) definition
 - B) accuracy
 - C) power
 - D) consistency
29. A bathroom scale always weighs 70 kilograms no matter who steps on it. As a measure of weight, the scale lacks:
- A) reliability.
 - B) validity.
 - C) consistency.
 - D) parsimony.
30. Which measure lacks both reliability and validity?
- A) scholastic aptitude as measured by the score on an SAT test
 - B) happiness as measured by heart beats per minute
 - C) intelligence as measured in terms of birth order
 - D) class performance as measured by randomly picking a grade out of a hat
31. Roger wants to study whether the level of personal income predicts happiness. He operationally defines “income” as “the gross amount of money a person earns in a calendar year.” He operationally defines “happiness” as “the ability of that person to stand on one leg for longer than 3 minutes.” What is glaringly wrong with Roger's study?
- A) It lacks validity; “income” can be measured, but “happiness” cannot.
 - B) It lacks reliability; the operational definitions of the properties under study produce inconsistent measurements.
 - C) It lacks validity; the operational definition of “happiness” is unrelated to the underlying property of happiness.
 - D) It lacks reliability; it is difficult to precisely measure both “income” and “happiness.”

32. Vanessa and Jenny take a reaction-time test. Vanessa's reaction time is 0.23 seconds, and Jenny's reaction time is 0.25 seconds. Suppose that the stopwatch the psychologist used only measured to a tenth of a second. The psychologist concludes that Vanessa and Jenny have equal reaction times of 0.2 seconds. As a measure of reaction time, the stopwatch lacks:
- A) reliability.
 - B) validity.
 - C) power.
 - D) reactivity.
33. When aspects of a setting cause participants to behave the way they think an observer wants them to behave, the problem of _____ is present.
- A) demand characteristics
 - B) complexity
 - C) validity
 - D) variability
34. Which statement is an example of a demand characteristic?
- A) Laura enjoys reading tabloids in her free time.
 - B) Mark acts more polite than normal while on a date.
 - C) Seth buys a certain brand of candy because it appears that there are only a few left.
 - D) Lacey speeds so that she won't be late to her next class.
35. Which description is the BEST example of naturalistic observation research methodology?
- A) a second-grade teacher manipulating reading materials to determine which promotes the greatest literacy
 - B) a psychologist measuring symptoms of depression using a survey
 - C) an inconspicuous economist observing the buying habits of shoppers at a grocery store
 - D) a professor evaluating the degree of student learning through exam performance
36. Reggie is curious about how many women versus men shake the handle of the gas pump after they finish fueling their automobiles. Reggie positions himself inside a minimart, where he appears to be a shopper, but all the while he is casually looking out a large window and recording the pump behaviour of women and men at the fueling stations. What type of research is Reggie conducting?
- A) double-blind observation
 - B) naturalistic observation
 - C) an experiment
 - D) case study

37. What is one reason why naturalistic observation alone cannot solve the problem of demand characteristics?
- A) Some things of interest to psychologists do not occur naturally.
 - B) It is impossible not to be detected.
 - C) People become angry if they discover that someone has been watching them.
 - D) Recording devices are too expensive for scientists to purchase.
38. What do the following have in common: a microphone concealed in the ceiling of a laboratory, filler items on a psychological survey meant to distract from a study's true purpose, and a misleading explanation told to participants about the purpose of a study?
- A) They all are forms of experimenter bias.
 - B) They all are examples of unethical research.
 - C) They all are examples of naturalistic observation.
 - D) They all are ways of avoiding demand characteristics.
39. Which technique is NOT used to reduce demand characteristics?
- A) ensure participant anonymity
 - B) study behaviour not under voluntary control
 - C) clearly identify the purpose of the study to participants
 - D) observe people without their knowledge
40. What is the BEST way to make it less likely that people will be influenced by demand characteristics?
- A) pay them for their participation
 - B) randomly select them from the population
 - C) require that they sign their name to each survey that they complete
 - D) keep them from knowing the true purpose of the observation
41. A clinical psychologist is evaluating a client recovering from a substance abuse disorder to evaluate his likelihood of relapse. Which measure is LEAST susceptible to demand characteristics?
- A) measuring differences in blood pressure when exposed to drug paraphernalia
 - B) asking the client if he has used alcohol or drugs since their last session
 - C) asking the client to rate the severity of his daily cravings on a 10-point scale
 - D) showing the client pictures of drug paraphernalia and asking him if the pictures are triggering cravings

42. In a classic experiment, psychology students were assigned to work either with “bright” rats or with “dull” rats, described as such by the experimenter. After a series of tests, the students' results showed that the “bright” rats had outperformed the “dull” rats. However, in fact, all the rats were of the same strain and breed; there were no pre-existing differences between the groups. What caused the difference in their performance?
- A) By chance, the rats in one group actually were brighter than those in the other group.
 - B) Demand characteristics in the experiment cued the rats about how to perform in the mazes.
 - C) The students' expectations about the rats' performance influenced their observations and behaviours.
 - D) The students looked at average scores rather than at each rat's individual score.
43. Which technique helps reduce bias due to prior expectations?
- A) the case method
 - B) double-blind observation
 - C) use of a correlation coefficient
 - D) random sampling
44. An experiment in which the true purpose is hidden from the researcher as well as from the participant is called a:
- A) blind experiment.
 - B) double-blind experiment.
 - C) controlled experiment.
 - D) correlational study.
45. A double-blind study:
- A) necessarily has sufficient power to detect group differences.
 - B) usually lacks reliability.
 - C) minimizes expectancy effects.
 - D) cannot be used to determine cause and effect.
46. Dr. Gomez is investigating a new drug designed to reduce anxiety. Patients with an anxiety disorder are treated with either the drug or a sugar pill (placebo) for some time, and Dr. Gomez records their anxiety levels at weekly appointments. If a double-blind procedure is used:
- A) only Dr. Gomez will know which patients actually received the drug.
 - B) the patients will know if they are receiving the drug or the placebo.
 - C) Dr. Gomez will not be told the operational definition of anxiety.
 - D) Dr. Gomez will not know which patients actually received the drug.

47. A graphical representation of the measurements of a sample that are arranged by the number of times each measurement was observed is a:
- A) Gaussian distribution.
 - B) frequency distribution.
 - C) normal distribution.
 - D) scatter plot.
48. A frequency distribution in which most measurements are concentrated around the mean and fall off toward the tails, and where the two sides of the distribution are symmetrical, is called a:
- A) normal distribution.
 - B) positively skewed distribution.
 - C) negatively skewed distribution.
 - D) standard distribution.
49. Which characteristic describes a normal distribution?
- A) It is symmetrical around a single peak in the middle.
 - B) It has a peak at each end of the distribution.
 - C) It is skewed to one side or the other.
 - D) It resembles a straight line.
50. Professor Kim creates a frequency distribution of exam scores from her class of 300 students. Possible scores on the exam ranged from zero to 100. What should be displayed on the horizontal axis?
- A) the number of times each possible score occurred
 - B) each possible score
 - C) the mean of the 300 scores
 - D) the name of each student
51. Professor Kim creates a frequency distribution of exam scores from her class of 300 students. Possible scores on the exam ranged from zero to 100. What should be displayed on the vertical axis?
- A) the number of times each possible score occurred
 - B) each possible score
 - C) the mean of the 300 scores
 - D) the name of each student

52. The “most frequent” measurement in a frequency distribution is the:
- A) mode.
 - B) mean.
 - C) median.
 - D) range.
53. The arithmetic average of the measurements in a frequency distribution is the:
- A) mode.
 - B) mean.
 - C) median.
 - D) range.
54. If an odd number of scores are put in order from lowest to highest, the score in the middle position is the:
- A) mode.
 - B) mean.
 - C) median.
 - D) range.
55. Half the measurements in a positively skewed frequency distribution are greater than or equal to the _____, and half are less than or equal to it.
- A) mode
 - B) mean
 - C) median
 - D) range
56. In a normal distribution, the peak of the distribution corresponds to which measurement(s)?
- A) mode only
 - B) mean only
 - C) median only
 - D) mode, mean, and median
57. In the number sequence 1 1 2 3 4 5, which number is the mode?
- A) 4
 - B) 3
 - C) 1
 - D) 2

58. What is the mean of the following number sequence: 1 1 2 4?
- A) 4
 - B) 3
 - C) 1
 - D) 2
59. In the number sequence 3 6 1 1 9, which number is the median?
- A) 4
 - B) 3
 - C) 1
 - D) 6
60. Five extremely tall members of the college basketball team are among 30 students in an introductory psychology class. If a frequency distribution is taken of height, the distribution probably will be:
- A) normal.
 - B) positively skewed.
 - C) negatively skewed.
 - D) bimodal.
61. A college dean is interested in measuring the research productivity of the seven members of the Psychology department. The dean obtains the number of publications for each faculty member. They are as follows: 5, 10, 15, 15, 20, 25, and 180. If the dean wants to describe these data, which measure of central tendency would paint a misleading picture of the research productivity of the department?
- A) mean
 - B) median
 - C) mode
 - D) standard deviation
62. The grade distribution of an “easy” course, in terms of overall percentage score (0–100), is best described by a:
- A) normal distribution with a large standard deviation.
 - B) normal distribution with a small standard deviation.
 - C) negatively skewed distribution.
 - D) positively skewed distribution.

63. In a negatively skewed distribution, the peak of the distribution corresponds to which measurement(s)?
- A) mode only
 - B) mean only
 - C) median only
 - D) mode, mean, and median
64. Which statement is true if scores on an examination are negatively skewed?
- A) The modal score is the same as the median score.
 - B) The median score is greater than the mean score.
 - C) The mean score is greater than the modal score.
 - D) The peak of the frequency distribution corresponds to the mean score.
65. The numerical difference between the smallest and largest measurements in a frequency distribution is the:
- A) mode
 - B) mean
 - C) median
 - D) range
66. In the number sequence 3 6 1 1 9, what is the range?
- A) 4
 - B) 6
 - C) 1
 - D) 8
67. The statistic that describes the average distance between the measurements in a frequency distribution and the mean of that distribution is the:
- A) mode.
 - B) standard deviation.
 - C) median.
 - D) range.
68. Studies have shown that men and women have the same mean intelligence (IQ) score, but that men have a larger range and standard deviation of scores. Based on this statement, which statement is true?
- A) IQ scores are not normally distributed in men.
 - B) Men are more likely to have extremely high scores.
 - C) The modal IQ score between genders differs.
 - D) Women are more likely to have extremely low scores.

69. Intelligence tends to be normally distributed, and studies have shown that men and women have the same mean intelligence (IQ) score. However, intelligence scores in women tend to have a smaller range and standard deviation than those in men. Based on these statements, which statement is true?
- A) The modal score in men is greater than the modal score in women.
 - B) The modal score in women is greater than the modal score in men.
 - C) Men are more likely to have extremely low scores.
 - D) Women are more likely to have extremely high scores.
70. A property with a value that can vary or change is called a(n):
- A) variable.
 - B) modifier.
 - C) adaptation.
 - D) outlier.
71. Correlations detect:
- A) the power of a measure.
 - B) patterns of variation in a series of measurements.
 - C) patterns of selection in a varied population.
 - D) sources of unsystematic error in a data set.
72. The pattern of covariation between two variables, each of which has been measured several times, is referred to as:
- A) variance.
 - B) power deviation.
 - C) a correlation.
 - D) an operational definition.
73. The statement “Eating less spinach is associated with a shorter life span” is an example of:
- A) a correlation.
 - B) a causal relationship.
 - C) variation.
 - D) an estimate.

74. A _____ correlation is associated with a less-is-less relationship.
- A) negative
 - B) positive
 - C) strong
 - D) weak
75. A _____ correlation is associated with a less-is-more relationship.
- A) negative
 - B) positive
 - C) strong
 - D) weak
76. Which statement describes a negative correlation?
- A) Increased time studying is associated with a higher GPA.
 - B) Life expectancy increases as body weight decreases.
 - C) Body weight tends to increase with increases in height.
 - D) People who eat more tend to weigh more.
77. Increases in illegal drug use are associated with a higher risk of contracting HIV/AIDS. This is MOST clearly an example of:
- A) a positive correlation.
 - B) a negative correlation.
 - C) an experiment.
 - D) the double-blind technique.
78. The less children watch violent television programming, the less aggressive children will tend to be. This is an example of:
- A) a positive correlation.
 - B) a negative correlation.
 - C) cause and effect.
 - D) an experiment.
79. People who drink more alcohol tend to have lower personal incomes. This is an example of:
- A) a positive correlation.
 - B) a negative correlation.
 - C) cause and effect.
 - D) an unreliable measure.

80. Which number represents the strongest correlation coefficient (r)?
- A) $-.8$
 - B) $.7$
 - C) $-.1$
 - D) 0
81. Which number represents the weakest correlation coefficient (r)?
- A) $-.8$
 - B) 1.0
 - C) $-.1$
 - D) $.5$
82. Correlations observed in the world around us are termed:
- A) natural experiments.
 - B) independent variables.
 - C) case studies.
 - D) natural correlations.
83. Which statement regarding variables is true?
- A) All variables that are correlated are also causally related.
 - B) All variables that are causally related are, by definition, not correlated with one another.
 - C) All variables that are correlated are causally related, but the causes may be unknown to the observer.
 - D) All variables that are causally related are correlated, but not all variables that are correlated are causally related.
84. What does the third-variable problem indicate?
- A) The three variables are all causally related to one another; each is a cause of the others.
 - B) The correlation between any two of the variables must be established before another correlation can be computed.
 - C) Two of the variables are correlated with each other only because each is causally related to a third variable.
 - D) Changes in one variable are producing changes in another variable.

85. Research has shown that there is a correlation between the amount of violence a child sees on TV and the aggressiveness of the child's behaviour. One explanation of this correlation is that children who watch a great deal of violence on television have a lack of adult supervision. This explanation is an example of what kind of correlation?
- A) matched sample
 - B) matched pair
 - C) positive
 - D) third-variable
86. Fatima wants to study how ice cream consumption in a school cafeteria is related to aggressive playground behaviour during recess. She realizes that lack of teacher supervision is a possible third variable that could cause both overconsumption and aggressiveness. She studies only children who have received identical amounts of supervision during the day. What technique is Fatima using to attempt to control for this third variable?
- A) matched samples
 - B) matched pairs
 - C) matched supervisors
 - D) double-blind observation
87. In studying the correlation between the amount of time children watch violence on television and children's levels of aggressiveness, researchers found that a lack of adult supervision could be a third variable. To control for the third variable, researchers observed children who experienced different amounts of supervision. They made sure that for every child observed who watched a lot of violence on television and was supervised X% of the time, they also observed another child who did not watch a lot of violence on television and was supervised X% of the time. This method is called:
- A) third-variable correlation.
 - B) matched samples.
 - C) matched pairs.
 - D) manipulation.
88. Why do neither matched samples nor matched pairs effectively eliminate the possibility of a third-variable correlation?
- A) Each technique depends on the other; matched samples are studied first, followed later by matched pairs.
 - B) Both techniques allow us to rule out a particular third variable as a causal agent, but not the possibility of other third variables.
 - C) Both techniques fail to utilize random sampling.
 - D) By eliminating specific third variables, cause-and-effect relations are artificially established.

89. What is the third-variable problem in reference to correlational studies?
- A) Third variables act causally on some other variables, but not on all other variables.
 - B) Each variable in a correlation exerts a causal influence on the other.
 - C) A causal relationship between two variables cannot be inferred from the correlation between two variables.
 - D) Correlations can be caused only by another (third) variable.
90. What is the biggest limitation in natural correlation research?
- A) Natural correlations tell us nothing about the relationship between two variables.
 - B) A causal relationship cannot be inferred.
 - C) Natural correlations have no predictive power.
 - D) Most of the time, natural correlations are too complicated to determine.
91. Correlation is to _____ as experimentation is to _____.
- A) measurement of variables; manipulation of variables
 - B) single variables; multiple variables
 - C) manipulation of variables; measurement of variables
 - D) unobtrusiveness; correlation
92. What is the main advantage of experimentation over correlation in determining causal relationships?
- A) Experimentation offers the possibility of controlling for all potential third variables at once.
 - B) Experimentation involves multiple variables, whereas correlation involves only two variables.
 - C) Experimentation systematically controls third variables one at a time, in sequence.
 - D) Experimentation uses the matched pairs and matched samples techniques to control for specific third variables.
93. What are the two key features to an experiment?
- A) manipulation and random assignment
 - B) manipulation and correlation
 - C) random assignment and correlation
 - D) manipulation and predictability
94. What is the only way to determine a causal relationship between two variables?
- A) observation
 - B) correlation
 - C) measurement
 - D) experimentation

95. If Dr. Smith wants to determine whether drinking alcohol causes feelings of sadness, what research strategy should be used?
- A) experiment
 - B) natural correlation
 - C) matched-pairs correlation
 - D) case study method
96. In an experiment, researchers exposed half the children to two hours of violence on television every day for a month and made sure the other half saw no violence on television at all. At the end of the month, they measured the aggressiveness in the children. The fact that the researchers ensured that some children watched violence on television and others did not is an example of:
- A) matched pairs.
 - B) matched samples.
 - C) correlation.
 - D) manipulation.
97. What does the term *manipulation* mean in the context of performing an experiment?
- A) the ability to design an experiment so that participants react in certain predetermined ways
 - B) the ability to change a variable in order to determine its causal powers
 - C) the ability to hold constant third variables
 - D) the ability to control the responses of research participants
98. In the context of an experiment, participants in the experimental group:
- A) are exposed to a third variable.
 - B) behave as they normally would.
 - C) receive a particular manipulation.
 - D) are not treated differently from any other participants.
99. In an experiment, researchers exposed half the children to two hours of violence on television every day for a month and made sure the other half saw no violence on television at all. At the end of the month, they measured the level of aggressiveness in the children. What is(are) the independent variable(s)?
- A) level of aggressiveness at the end of the month
 - B) amount of violence watched on television
 - C) level of aggressiveness at the end of the month and amount of violence watched on television
 - D) the children

100. In an experiment, researchers exposed half the children to two hours of violence on television every day for a month and made sure the other half saw no violence on television at all. At the end of the month, they measured the level of aggressiveness in the children. What is(are) the dependent variable(s)?
- A) level of aggressiveness at the end of the month
 - B) amount of violence watched on television
 - C) level of aggressiveness at the end of the month and amount of violence watched on television
 - D) the children
101. In an experiment, researchers exposed half the children to two hours of violence on television every day for a month and made sure the other half saw no violence on television at all. At the end of the month, they measured the level of aggressiveness in the children. What were the children who were exposed to violent television?
- A) dependent variable
 - B) independent variable
 - C) control group
 - D) experimental group
102. In an experiment, researchers exposed half the children to two hours of violence on television every day for a month and made sure the other half saw no violence on television at all. At the end of the month, they measured the level of aggressiveness in the children. What were the children who weren't exposed to any violence on television?
- A) dependent variable
 - B) independent variable
 - C) control group
 - D) experimental group
103. Researchers wanted to see if adults were actually afraid of the dark by exposing them to different levels of light in a room while measuring their heart rates. In this experiment, what are the different levels of light?
- A) dependent variable
 - B) independent variable
 - C) control group
 - D) experimental group

104. Researchers wanted to see if adults were actually afraid of the dark by exposing them to different levels of light in a room while measuring their heart rates. In this experiment, what are the heart rates of the participants?
- A) dependent variable
 - B) independent variable
 - C) control group
 - D) experimental group
105. When one manipulates an independent variable, at least how many groups are created?
- A) 1
 - B) 2
 - C) 3
 - D) 4
106. Researchers wanted to see if listening to calm music would reduce heart rates. Half of the research participants sat quietly and listened to calm music, and the other half sat quietly and listened to no music at all. The group that listened to the music is called the:
- A) dependent variable.
 - B) independent variable.
 - C) control group.
 - D) experimental group.
107. Researchers wanted to see if listening to calm music would reduce heart rates. Half of the research participants sat quietly and listened to calm music, and the other half sat quietly and listened to no music at all. The group that did not listen to the music is called the:
- A) dependent variable.
 - B) independent variable.
 - C) control group.
 - D) experimental group.
108. A researcher wants to assess the effects of varying amounts of alcohol on ratings of perception of friendliness. Three groups of people are given either 1, 2, or 3 beers to drink. Three more groups of people are given either 1, 2, or 3 non-alcoholic beers to drink. Then, all participants are shown a series of pictures of people's faces and are asked to rank the perceived friendliness of each face on a scale from 1 to 10. In this experiment, the independent variable is:
- A) the number of groups.
 - B) the amount of alcohol consumed.
 - C) the pictures of faces.
 - D) ratings of perceived friendliness.

109. A researcher wants to assess the effects of varying amounts of alcohol on ratings of perception of friendliness. Three groups of people are given either 1, 2, or 3 beers to drink. Three more groups of people are given either 1, 2, or 3 non-alcoholic beers to drink. Then, all participants are shown a series of pictures of people's faces and are asked to rank the perceived friendliness of each face on a scale from 1 to 10. Each face was presented for 5 seconds. In this experiment, the dependent variable is:
- A) the number of groups.
 - B) whether or not the beer had alcohol in it.
 - C) how long each participant was allowed to look at each face.
 - D) ratings of perceived friendliness.
110. Wally wants to see if room temperature affects happiness. He invites participants to the laboratory, where half are seated for 20 minutes in a booth held at a constant 68 degrees, and the other half are seated in an identical booth for 20 minutes at a constant 88 degrees. Wally then asks members of each group to rate their level of happiness. What is the dependent variable in this experiment?
- A) the number of participants
 - B) the elapsed time
 - C) the temperature of the booths
 - D) rating of happiness
111. _____ occurs when participants decide if they wish to be studied in the experimental or control group.
- A) Self-selection
 - B) Random assignment
 - C) Informed consent
 - D) Random sampling
112. What is the major problem associated with self-selection as a way to assign participants to the experimental and control groups?
- A) The treatment necessarily will work in the experimental group because those participants are especially motivated.
 - B) The two groups probably will differ on many variables besides whether or not they received the treatment.
 - C) Self-selection violates the requirement for informed consent.
 - D) Self-selection prevents the manipulation of the independent variable and measurement of the dependent variable.

113. _____ occurs when participants are assigned to the experimental or control group by coin flip.
- A) Self-selection
 - B) Random assignment
 - C) Double-blind experimentation
 - D) Random sampling
114. Diana wants to see if heat causes happiness. She asks 100 participants to come to the laboratory, and as they walk in, she asks each person to choose a warm booth or a cool booth. On the basis of their choices, participants spend 20 minutes in one or the other booth before rating their levels of general happiness. What's wrong with Diana's experiment?
- A) She didn't choose an independent variable.
 - B) She didn't measure a dependent variable.
 - C) She didn't randomly assign participants to the experimental and control groups.
 - D) She didn't expose participants to both the warm and cool booths.
115. Which method does NOT use random assignment to assign participants to groups?
- A) basing group assignment on a coin flip
 - B) basing group assignment on a dice roll
 - C) basing group assignment on the outcome of a random number generator
 - D) basing group assignment based on the order that participants arrive to be studied
116. Random assignment to groups helps ensure that:
- A) demand characteristics in each group are minimized.
 - B) an independent variable is manipulated in each group.
 - C) groups do not differ on variables not of interest.
 - D) a correlation does not exist between the independent and dependent variable.
117. When random assignment fails to create equivalent groups, the problem of _____ occurs.
- A) sampling error
 - B) self-selection
 - C) third variables
 - D) external validity

118. When the odds are acceptably low that random assignment hasn't failed in an experiment, the results of the experiment are said to be:
- A) applicable to the real world.
 - B) certain.
 - C) statistically significant.
 - D) operationally defined.
119. Descriptive statistics include measures such as mean or standard deviation. What is another group of statistics that is used to determine what kind of conclusions can be drawn from the results of an experiment?
- A) inferential statistics
 - B) applied statistics
 - C) internal statistics
 - D) validity coefficients
120. A result is said to be statistically significant if the odds that random assignment has failed in an experiment is less than _____ percent.
- A) 2
 - B) 5
 - C) 10
 - D) 25
121. A p -value is a(n):
- A) measure of central tendency.
 - B) measure of variability.
 - C) descriptive statistic.
 - D) inferential statistic.
122. The characteristic of an experiment that establishes the causal relationship between variables is termed:
- A) power.
 - B) reliability.
 - C) internal validity.
 - D) external validity.
123. All of these are features of an internally valid experiment EXCEPT:
- A) an independent variable is manipulated.
 - B) a valid, powerful, reliable measure is used for the dependent variable.
 - C) a correlation is observed between the independent and dependent variables.
 - D) the experimental and control groups differ on at least one third variable.

124. Which event is part of an internally valid experiment?
- A) An independent variable has been effectively manipulated.
 - B) Participants have been self-selected to the control and experimental groups.
 - C) The experiment resembles the real world as closely as possible.
 - D) A dependent variable has been effectively manipulated.
125. Dr. X did a study showing that violent video games increased aggression, while Dr. Y did a study showing that violent video games did not increase aggression. The most likely explanation is that:
- A) the experiment of one or both researchers was invalid.
 - B) one or both researchers lied about their results.
 - C) random assignment to groups failed in both experiments.
 - D) the researchers had different operational definitions of aggression.
126. External validity means that:
- A) an experiment used reliable measures of the independent variable.
 - B) a correlation was established between an independent and a dependent variable.
 - C) an experiment has been verified by a group of scientists not associated with the study.
 - D) the variables in an experiment have been defined in a normal, typical, or realistic way.
127. The closer an experiment is to the real world, the more psychologists can claim it has:
- A) internal validity.
 - B) external validity.
 - C) reliability.
 - D) statistical significance.
128. Most experiments in psychology lack:
- A) external validity.
 - B) internal validity.
 - C) randomization.
 - D) manipulation.
129. Externally invalid experiments:
- A) typically use self-selection to groups.
 - B) do not control for the third variable problem.
 - C) cannot determine cause and effect between two variables.
 - D) test hypotheses derived from theories.

130. The chair of the psychology department wants to determine the average GPA of all psychology majors at the college. She compiles a list of the GPAs of all the psychology majors and calculates the average. The chairperson is working with data from a(n):
- A) invalid source.
 - B) population.
 - C) sample.
 - D) case study.
131. The chair of the psychology department wants to determine the average GPA of all the psychology majors in the United States. She randomly selects 50 colleges and universities and compiles a list of the GPAs of all the psychology majors at those institutions. This list represents a(n):
- A) experimental group.
 - B) population.
 - C) sample.
 - D) case study.
132. Dr. Sardonicus learned of a woman whose tongue turned a bright shade of green whenever she felt stressed. Although this is a rare event in the general population, Dr. Sardonicus nonetheless interviewed the woman at great length and made detailed observations about her behaviour. Dr. Sardonicus used _____ to gather data.
- A) averaging
 - B) the case method
 - C) random sampling
 - D) the law of large numbers
133. A psychologist who studies memory processes by investigating the remarkable ability of Akira Haraguchi to accurately recite pi to 100,000 digits is using:
- A) experimentation.
 - B) the case method.
 - C) self-selection.
 - D) the double-blind technique.
134. The phrase " $n = 1$ " means that:
- A) the results are not statistically significant.
 - B) there is a perfect correlation between two variables.
 - C) there is only one participant in the study.
 - D) there is only one independent variable.

135. When every member of a population has an equal chance of being included in a sample, what sampling process is being used?
- A) reliability sampling
 - B) random assignment
 - C) random sampling
 - D) convenience sampling
136. Which statement accurately summarizes the way psychologists gather research participants?
- A) Psychologists usually use random samples of the population.
 - B) Psychologists typically use volunteers, often drawn from a college population.
 - C) Psychologists typically select participants at random from the phone book.
 - D) Psychologists only select participants who outwardly appear to be of average intelligence.
137. Psychologists usually select participants for study based on:
- A) convenience.
 - B) random sampling.
 - C) random assignment.
 - D) matched pairs.
138. If researchers are interested in whether or not it is possible for a person to have a reaction time less than 0.05 seconds, and they simply measure the reaction times of volunteers who sign up for the study, what rationale would the researchers give for not using random sampling?
- A) Sometimes generality does not matter.
 - B) Sometimes generality cannot be determined.
 - C) Sometimes generality can be determined.
 - D) Sometimes generality is best determined by non-random sampling.
139. If researchers measure how some American children behave after playing *Blood Sport* for two hours, then replicate the experiment with Asian, European, and African children and then with teenagers, the researchers would be using which justification of non-random sampling?
- A) Sometimes generality does not matter.
 - B) Sometimes generality is the cause of the effect.
 - C) Sometimes generality can be determined.
 - D) Sometimes generality can be assumed.

140. If researchers are interested in the average time it takes to press a button when a green light flashes on a screen, and they simply measure the reaction times of volunteers who sign up for the study, what rationale would the researchers give for not using random sampling?
- A) Sometimes generality does not matter.
 - B) Sometimes generality cannot be determined.
 - C) Sometimes generality can be determined.
 - D) Sometimes generality can be assumed.
141. The scientific method was first formalized by:
- A) Newton.
 - B) Galileo.
 - C) Bacon.
 - D) Descartes.
142. Which statement about critical thinking is true?
- A) Humans have a natural tendency to evaluate evidence critically.
 - B) Courses designed to increase critical thinking usually are effective.
 - C) Decisions based on empirical data necessarily involve critical thinking.
 - D) Thought patterns that have been evolutionary adaptive often interfere with the ability to critically evaluate evidence.
143. Humans have a natural tendency to:
- A) notice evidence that is inconsistent with their beliefs.
 - B) see what they expect or wish to see.
 - C) engage in critical thinking as a default cognitive strategy.
 - D) give undue importance to events that are contrary to their wishes or desires.
144. Darley and Gross (1983) showed participants a video of a girl taking a reading test. They then asked participants to rate the girl's academic ability. These researchers found that participants rated her academic ability higher if they thought that she:
- A) was from an affluent family.
 - B) was from an extremely religious family.
 - C) had struggled to overcome her family's poverty.
 - D) was 10 years of age instead of 12 years of age.

145. Darley and Gross (1983) showed participants a video of a girl taking a reading test. Some participants were told that the girl was from an affluent family and others were told that she was from a poor family. Then, participants were asked to rank the girl's academic abilities. Which statement regarding the findings of this experiment is true?
- A) Ratings were unaffected by knowledge of the girl's socioeconomic status as long as she was dressed similarly in both videos.
 - B) Ratings were unaffected by knowledge of the girl's socioeconomic status as long as the girl performed equally well on the reading test in both videos.
 - C) Ratings were higher if they thought the girl was affluent relative to poor, but participants could not justify these ratings with evidence from the video.
 - D) Ratings were higher if they thought the girl was affluent relative to poor, and participants could justify these ratings with evidence from the video.
146. Participants in one study (Lord, Ross, & Lepper, 1979) were first asked about their beliefs regarding the death penalty, and then they were provided with evidence both for and against it. After studying these materials, beliefs about the death penalty were reassessed. This study found that participants:
- A) reported that their original beliefs were weakened after evaluating arguments on both sides of the debate.
 - B) were more likely to favour the death penalty, regardless of their original beliefs.
 - C) were more likely to oppose the death penalty, regardless of their original beliefs.
 - D) reported that their original beliefs were strengthened after evaluating arguments on both sides of the debate.
147. Suppose that a local government is considering a construction project that will cost tax payers a large amount of money. Residents have strong views on both sides of the debate. In an attempt to educate the public, the city arranges several informational sessions in which the pros and cons of the project are discussed. Which result is consistent with the psychological literature?
- A) Residents' original attitudes toward the project would be strengthened by attending the informational sessions.
 - B) Residents' original attitudes toward the project would be weakened slightly by attending the informational sessions.
 - C) The majority of the residents would change their minds after hearing evidence on both sides of the debate.
 - D) The informational sessions would have no effect whatsoever on residents' attitudes toward the project.

148. People are more critical of new evidence that is:
- A) consistent with common sense.
 - B) consistent with their attitudes or beliefs.
 - C) inconsistent with their attitudes or beliefs.
 - D) presented using emotionally charged language.
149. When presented with information that is inconsistent with their attitudes or beliefs, people generally ask themselves which question?
- A) Is there any evidence here that would make me reconsider my opinion?
 - B) Is this evidence stronger than the evidence consistent with my beliefs?
 - C) What would be the social repercussions if I change my mind on this issue?
 - D) Is this information flawed or limited in some way?
150. Consistent with psychological research, politicians tend to surround themselves with advisors who:
- A) like to play devil's advocate and challenge the politicians' beliefs on policy issues.
 - B) validate the politicians' beliefs on most policy issues.
 - C) present both sides of a policy issue in a fair and balanced way.
 - D) spend more time objectively considering evidence that opposes the politicians' beliefs.
151. Jeff must find four sources for a term paper he is writing on corporal punishment (i.e., spanking). Jeff's family spanked him when he misbehaved as a child, and Jeff believes that it is a useful behavioural modification technique. If Jeff is like most people, he probably will:
- A) find four studies suggesting that corporal punishment is effective and relatively harmless.
 - B) find four studies suggesting that corporal punishment is dangerous, but then attempt to discredit this research.
 - C) review two studies on each side of the debate in a fair and balanced way.
 - D) change his mind once reviewing the evidence on both sides of the debate.
152. Which statement about the role of missing evidence in decision making is true?
- A) People have a natural tendency to seek out informational gaps in order to arrive at the best possible decision.
 - B) People usually overvalue the importance of missing evidence.
 - C) People usually ignore missing evidence.
 - D) People have a strong tendency to actively seek missing information if what is missing would challenge their existing beliefs.

153. In order to develop your critical thinking skills, you should:
- A) try to avoid being skeptical of new evidence.
 - B) surround yourself with people who do not share your views.
 - C) believe everything published in quality scientific journals.
 - D) not base decisions on missing evidence.
154. Informed consent:
- A) must be obtained before individuals participate in an experiment.
 - B) is strongly recommended but not mandatory for individuals participating in an experiment.
 - C) is not necessary unless painful stimuli are involved.
 - D) is mandatory only for participants over 18 years of age.
155. The ethical principle of _____ means that research participants are given enough information about a study to make a reasonable decision about whether or not to participate.
- A) freedom from coercion
 - B) informed consent
 - C) debriefing
 - D) protection from harm
156. Jill decides to participate in research studies conducted by professors in the psychology department. Before a study begins, she is given what looks like a contract that describes the study, as well as the risks and benefits of participating. This describes:
- A) debriefing.
 - B) informed consent.
 - C) demand characteristics.
 - D) research instructions.
157. An instructor makes it clear to his psychology students that if they do not participate in his research, they will receive a failing grade. What ethical principle has the instructor violated?
- A) freedom of consent
 - B) informed consent
 - C) debriefing
 - D) protection from harm

158. According to the Canadian Psychological Association (CPA) code of ethics, which statement about risk-benefit analysis is true?
- A) Participants may not be asked to take small risks.
 - B) Participants may be asked to accept large risks.
 - C) Participants may not be asked to accept large risks.
 - D) Participants may not be asked to take any risks.
159. Which statement regarding deception in psychological research is true?
- A) Deception cannot be used.
 - B) Deception is a standard practice to minimize demand characteristics and does not need to be justified.
 - C) Deception cannot be used if it puts participants at risk of harm or pain.
 - D) Deception involving exposure to harm or pain is only justified if debriefing is provided.
160. Which statement regarding deception in psychological research is true?
- A) Deception cannot be used.
 - B) Deception is a standard practice to minimize demand characteristics and does not need to be justified.
 - C) Deception can be used only when alternative procedures are not available and the study has applied or scientific value.
 - D) Deception can be used anytime it answers an important scientific question.
161. As part of her course requirements, Jill participates in research studies conducted by professors. After she participates, she is fully informed about the nature of the study. This describes:
- A) debriefing.
 - B) informed consent.
 - C) demand characteristics.
 - D) risk-benefit analysis.
162. The ethical principle of _____ means that participants must be told the true purpose and nature of an experiment after it is over.
- A) informed consent
 - B) debriefing
 - C) protection from harm
 - D) freedom from coercion

163. How is the psychological code of ethics as it pertains to respecting people enforced?
- A) by the honour system (self-regulation)
 - B) by research ethics boards at each institution
 - C) by international inspectors from the United Nations task force on human rights.
 - D) through the tenure and promotion system at colleges and universities.
164. Which statement about the use of animals in psychological research is true?
- A) People for the Ethical Treatment of Animals approves of the use of animals in psychological research.
 - B) Most research in psychology involves the use of animals.
 - C) Animals in psychological research may be used in experiments if there is no other way to conduct the research and there is a strong justification for the research.
 - D) The Canadian Psychological Association is against the use of animals in psychological research.
165. The ethical analysis and reporting of scientific results is regulated by:
- A) federal grant agency systems.
 - B) national review boards (NRBs).
 - C) research ethics boards (REBs).
 - D) the honour system.

Answer Key

1. C
2. A
3. C
4. A
5. C
6. B
7. A
8. C
9. D
10. C
11. D
12. D
13. B
14. C
15. C
16. D
17. D
18. A
19. D
20. C
21. D
22. A
23. D
24. B
25. D
26. A
27. B
28. C
29. B
30. D
31. C
32. C
33. A
34. B
35. C
36. B
37. A
38. D
39. C
40. D
41. A
42. C
43. B
44. B

45. C
46. D
47. B
48. A
49. A
50. B
51. A
52. A
53. B
54. C
55. C
56. D
57. C
58. D
59. B
60. B
61. A
62. C
63. A
64. B
65. D
66. D
67. B
68. B
69. C
70. A
71. B
72. C
73. A
74. B
75. A
76. B
77. A
78. A
79. B
80. A
81. C
82. D
83. D
84. C
85. D
86. A
87. C
88. B
89. C
90. B

- 91. A
- 92. A
- 93. A
- 94. D
- 95. A
- 96. D
- 97. B
- 98. C
- 99. B
- 100. A
- 101. D
- 102. C
- 103. B
- 104. A
- 105. B
- 106. D
- 107. C
- 108. B
- 109. D
- 110. D
- 111. A
- 112. B
- 113. B
- 114. C
- 115. D
- 116. C
- 117. C
- 118. C
- 119. A
- 120. B
- 121. D
- 122. C
- 123. D
- 124. A
- 125. D
- 126. D
- 127. B
- 128. A
- 129. D
- 130. B
- 131. C
- 132. B
- 133. B
- 134. C
- 135. C
- 136. B

- 137. A
- 138. A
- 139. C
- 140. D
- 141. C
- 142. D
- 143. B
- 144. A
- 145. D
- 146. D
- 147. A
- 148. C
- 149. D
- 150. B
- 151. A
- 152. C
- 153. B
- 154. A
- 155. B
- 156. B
- 157. A
- 158. C
- 159. C
- 160. C
- 161. A
- 162. B
- 163. B
- 164. C
- 165. D