Name: _____ Class: _____ Date: _____

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1. A(n) _____ is any characteristic of a person, place, or thing that can change over time or across situations.
   a. stimulus
   b. response
   c. operation
   d. variable

ANSWER: d

2. Temperature, height, and hair color are all
   a. behaviors.
   b. operations.
   c. variables.
   d. Both a and b are correct.

ANSWER: c

3. The _____ variable is the factor that varies across the different conditions in an experiment.
   a. dependent
   b. independent
   c. extraneous
   d. nondependent

ANSWER: b

4. The _____ variable is the outcome that is measured in an experiment.
   a. dependent
   b. independent
   c. extraneous
   d. confounding

ANSWER: a

5. Cause is to effect as _____ variable is to _____ variable.
   a. extraneous; dependent
   b. dependent; extraneous
   c. dependent; independent
   d. independent; dependent

ANSWER: d

6. The outcome or effect in an experiment is the _____variable.
   a. independent
   b. dependent
   c. extraneous
   d. confounding

ANSWER: b

7. In an experiment concerning the effect of food deprivation on activity level, food deprivation is the _____ variable.

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a. dependent
b. confounding
c. independent
d. extraneous

ANSWER: c

8. In an experiment concerning the effect of food deprivation on activity level, activity level is the _____ variable.
a. dependent
b. confounding
c. independent
d. extraneous

ANSWER: a

9. In the experiment with the rats and the goal box, the _____ is the independent variable.
a. level of activity
b. food
c. goal box
d. rat

ANSWER: b

10. Suppose you are experimenting with the effects of sleep deprivation on memory. In this case, sleep deprivation is a(n):
a. extraneous variable.
b. dependent variable.
c. independent variable.
d. mediating variable.

ANSWER: c

11. In the experiment with the rats and the goal box, the _____ is the dependent variable.
a. rat
b. goal box
c. level of activity
d. food

ANSWER: c

12. In the experiment with the rats and the goal box, the number of food pellets given when the rats reach the goal box is the
a. extraneous variable.
b. confounding variable.
c. dependent variable.
d. independent variable.

ANSWER: d

13. The relationship between changes in an independent variable and changes in a dependent variable is known as a(n) _____ relationship.

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a. operational
b. variable
c. mechanistic
d. functional

ANSWER: d

14. If a certain diet affects the extent to which one is likely to acquire a certain disease, then there is a(n) _____ relationship between the diet and the disease.

a. operational
b. mechanistic
c. functional
d. independent

ANSWER: c

15. A cause-and-effect relationship could also be called a(n) _____ relationship.

a. independent
b. functional
c. derivative
d. mechanistic

ANSWER: b

16. Every time Randy watches a horror movie, he has a nightmare that same evening. If he never has a nightmare except when he watches a horror movie, it would indicate a(n) _____ between watching horror movies and having nightmares.

a. spurious relationship
b. functional relationship
c. establishing operation
d. operational relationship

ANSWER: b

17. Mosquito repellents that contain the chemical agent DEET are significantly more effective than those that do not contain DEET. In other words, there is a _____ relationship between the presence of DEET and the number of mosquito bites.

a. formational
b. nonformational
c. functional
d. nonfunctional

ANSWER: c

18. A stimulus is any event that can

a. potentially influence behavior.
b. be transformed into a behavior.
c. be measured.
d. be detected.

ANSWER: a

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19. A flashing light, a loud bang, and a bad smell are all
    a. extraneous variables.
    b. stimuli.
    c. confounding variables.
    d. responses.

ANSWER: b

20. The sound of a door slam causes your cat to jump off the couch. The sound of the door slamming is a(n)
    a. confounding variable.
    b. stimulus.
    c. extraneous variable.
    d. reaction.

ANSWER: b

21. A _____ is a specific instance of behavior.
    a. stimulus
    b. releaser
    c. response
    d. operation

ANSWER: c

22. With respect to a rat's behavior of pressing a lever for food, a single lever press is an example of a(n):
    a. operation.
    b. stimulus.
    c. independent variable.
    d. response.

ANSWER: d

23. Jan says "Boo!" to Tyler on Halloween. Tyler jumps up in fright. The jump is an example of a(n) _____ by Jan and a _____ for Tyler.
    a. response; stimulus
    b. stimulus; response
    c. operation; dependent variable
    d. response; response

ANSWER: a

24. The term _____ behavior refers to any behavior that has the potential for being directly observed by another individual.
    a. covert
    b. dependent
    c. overt
    d. independent

ANSWER: c

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25. The push-ups that I did this morning are best described as an example of a(n):
    a. extraneous behavior.
    b. impulsive behavior.
    c. covert behavior.
    d. overt behavior.

ANSWER: d

26. The term _____ behavior refers to any behavior that can be subjectively perceived only by the person performing the behavior.
    a. covert
    b. extraneous
    c. overt
    d. implosive

ANSWER: a

27. The dream I had last night is best described as an example of a(n)
    a. extraneous behavior.
    b. establishing operation.
    c. covert behavior.
    d. overt behavior.

ANSWER: c

28. Whenever Mehmed listens to a lecture by Dr. Dull, he begins to daydream. From Mehmed's perspective, the daydreaming is a(n) _____, while the lecture by Dr. Dull is a _____.
    a. overt response; covert response
    b. stimulus; covert response
    c. overt response; stimulus
    d. covert response; stimulus

ANSWER: d

29. Overt behavior is to _____ as covert behavior is to _____.
    a. talking; daydreaming
    b. thinking; acting
    c. establishing; reacting
    d. dreaming; thinking

ANSWER: a

30. A(n) _____ stimulus is one that an organism will move toward.
    a. functional
    b. adversive
    c. appetitive
    d. aversive

ANSWER: c

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31. A(n) _____ stimulus is one that an animal will move away from.

a. functional
b. aversive
c. appetitive
d. imperative

ANSWER: b

32. Pleasant is to _____ as unpleasant is to _____.

a. functional; imperative
b. imperative; aversive
c. adversive; appetitive
d. appetitive; aversive

ANSWER: d

33. For most children, a bee sting is to _____ as candy is to _____.

a. adversive; imperative
b. appetitive; aversive
c. aversive; appetitive
d. adversive; appetitive

ANSWER: c

34. If someone goes "looking for a fight," then fighting must be a(n) _____ stimulus for that individual.

a. aversive
b. appositive
c. appetitive
d. nonfunctional

ANSWER: c

35. Depriving an animal of food is an example of a(n)

a. functional operation.
b. establishing operation.
c. establishing response.
d. stimulus operation.

ANSWER: b

36. A procedure that increases the appetitiveness or aversiveness of a stimulus is called a(n)

a. establishing procedure.
b. establishing operation.
c. consequence strengthening procedure.
d. consequence strengthening operation.

ANSWER: b

37. Jared got sick after eating too much cake. From then onward, he could no longer eat cake. The act of eating too much cake

functioned as a(n) _____ with respect to the subsequent likelihood of again eating cake.

a. establishing response
b. dependent variable
c. extraneous operation
d. establishing operation

ANSWER: d

38. Joanna does not feed her dog during the day to ensure that he eats all of his dinner that evening. This is an example of

a. shaping.
b. negative punishment.
c. extinction.
d. an establishing operation.

ANSWER: d

39. A(n) _____ is a procedure that decreases the appetitiveness or aversiveness of an event.

a. deprivation procedure
b. establishing operation
c. abolishing operation
d. extinction procedure

ANSWER: c

40. Too much is to very little as _____ is to _____.

a. divestiture; deprivation
b. deprivation; divestiture
c. satiation; deprivation
d. deprivation; satiation

ANSWER: c

41. Deprivation usually _____ the _____ of an event.

a. decreases; appetitiveness
b. increases; appetitiveness
c. decreases; adversiveness
d. increases; imperativeness

ANSWER: b

42. After eating a dozen hot dogs in one sitting, chances are that you would feel quite

a. deprived.
b. famished.
c. satiated.
d. deviated.

ANSWER: c

43. Satiation usually _____ the _____ of an event.

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a. decreases; appetitiveness
b. decreases; aversiveness
c. decreases; imperativeness
d. increases; appetitiveness

ANSWER: a

44. Closeness is to _____ as prediction is to _____.
a. functionality; contiguity
b. contingency; functionality
c. contingency; contiguity
d. contiguity; contingency

ANSWER: d

45. Prediction is to nearness as
a. contingent is to noncontingent.
b. noncontingent is to contingent.
c. contiguous is to contingent.
d. contingent is to contiguous.

ANSWER: d

46. The term _____ refers to the extent to which events occur close together in time.
a. temporal contiguity
b. spatial contiguity
c. temporal contingency
d. spatial contingency

ANSWER: a

47. The term _____ refers to the extent to which events occur in close physical proximity to each other.
a. temporal contiguity
b. spatial contiguity
c. temporal contingency
d. spatial contingency

ANSWER: b

48. In a large university housing area, students are often most likely to date those who live in units that are relatively near to their own. In other words, _____ seems to be an important factor in the formation of relationships.
a. spatial contiguity
b. temporal contiguity
c. temporal contingency
d. spatial contingency

ANSWER: a

49. At the sound of the starter's pistol, the sprinters quickly start running. Thus, the sound of the pistol and the start of running are:

a. temporally conjunctive.
b. spatially contiguous.
c. temporally contiguous.
d. spatially contingent.

ANSWER: c

50. A chair and a table are side by side. This means that they are:
a. temporally contingent.
b. temporally contiguous.
c. spatially contingent.
d. spatially contiguous.

ANSWER: d

51. The term _____ refers to a predictive relationship between two events.
a. covariance
b. contiguity
c. contingency
d. correlation

ANSWER: c

52. Debbie suffers from insomnia whenever she drinks coffee in the evening. In other words, her insomnia is _____ upon coffee drinking.
a. spatially contiguous
b. contingent
c. covariable
d. functionally contiguous

ANSWER: b

53. If there exists a causal relationship between event A and outcome B, then:
a. A is contingent on B.
b. B is contingent on A.
c. A is spatially contiguous with B.
d. B is spatially contiguous with A.

ANSWER: b

54. A good behavioral definition should refer to some _____ aspect of the behavior.
a. subjective
b. covert
c. abstract
d. observable

ANSWER: d

55. A good behavioral definition should be

a. objective and ambiguous.
b. subjective and abstract.
c. objective and unambiguous.
d. unambiguous and abstract.

ANSWER: c

56. Which of the following would constitute the most important aspect of a good behavioral definition of shyness?
a. Avoidance of groups of individuals
b. Feelings of shyness
c. Thoughts of shyness
d. Both b and c are correct.

ANSWER: a

57. A(n) _____ measure of behavior is the frequency with which a behavior occurs in a set period of time.
a. duration
b. interval
c. latency
d. rate

ANSWER: d

58. A useful device for measuring the _____ of a behavior is a cumulative recorder.
a. topography
b. rate
c. latency
d. intensity

ANSWER: b

59. Rate of response is a favorite measure of behavior for some researchers because it is
a. a very salient measure of behavior.
b. a very sensitive measure of behavior.
c. a very robust measure of behavior.
d. a very subjective measure of behavior.

ANSWER: b

60. If I wish to measure the effect of slight changes in caffeine level on a rat's behavior, I would need a sensitive measure of behavior. I should consider using a(n) _____ measure of response.
a. interval
b. latency
c. rate
d. topography

ANSWER: c

61. If I wish to test the effects of minor sleep deprivation on a rat's behavior, it would probably be wise to use a _____ measure of behavior because it is very sensitive.

a. duration
b. rate
c. speed
d. topographical

ANSWER: b

62. On a cumulative record, a _____ indicates a _____ of response.
a. flat line; high rate
b. steep line; low rate
c. shallow line; high rate
d. None of these are correct.

ANSWER: d

63. On a cumulative record, a _____ indicates a _____ of response.
a. flat line; lack of
b. steep line; low rate
c. shallow line: high rate
d. All of these are correct.

ANSWER: a

64. On a cumulative record, a _____ indicates a _____ of response.
a. flat line; high rate
b. steep line; high rate
c. shallow line; low rate
d. Both b and c are correct.

ANSWER: d

65. On a cumulative record, a _____ indicates a _____ of response.
a. flat line; high rate
b. steep line; lack of
c. shallow line; low rate
d. Both b and c are correct.

ANSWER: c

66. On a cumulative record, a _____ line indicates a period of _____ response.
a. vertical; no
b. shallow; rapid
c. steep; slow
d. horizontal; no

ANSWER: d

67. The _____ of a behavior is its force or magnitude.
a. topography

b. latency
c. intensity
d. rate

ANSWER: c

68. The loudness of my voice when I am in a stressful situation would be a(n) _____ measure of my stress level.

a. topography
b. latency
c. duration
d. intensity

ANSWER: d

69. The number of hours that I clean house each week is a _____ measure of behavior while the length of time that I procrastinate before starting to clean house on a particular evening is a _____ measure of behavior.

a. latency; speed
b. duration; latency
c. speed; latency
d. duration; speed

ANSWER: b

70. The amount of time that I spend driving my car each week is an example of a _____ measure of behavior.

a. speed
b. duration
c. latency
d. rate

ANSWER: b

71. Jonah's piano teacher is trying to get him to shorten the time it takes for him to learn to play a Beethoven sonata. The appropriate behavioral measure is therefore

a. duration.
b. latency.
c. topography.
d. speed.

ANSWER: d

72. In assessing a person's sleep patterns, you include a measure of how long it takes before the person falls asleep after he or she goes to bed. This would be regarded as a(n) _____ measure of his or her sleep behavior.

a. speed
b. intensity
c. topography
d. latency

ANSWER: d

73. The length of time it takes me to finish cleaning my apartment, from start to finish, is a _____ measure of behavior.

a. duration
b. latency
c. speed
d. interval

ANSWER: c

74. The amount of time it takes before I get out of bed in the morning is an example of _____; the amount of time it takes me to finish shaving is an example of _____.

a. latency; speed
b. duration; latency
c. speed; duration
d. latency; duration

ANSWER: a

75. As I watch television for four hours one evening, I make a record of whether there occurred at least one example of sexual humor during each half-hour segment. This is an example of a(n) _____ method of recording.

a. time-sample
b. duration
c. interval
d. rate

ANSWER: c

76. Laura is concerned that her little daughter is watching too much television and would, therefore, like to measure the occurrence of this behavior. Given that Laura has a lot of other things to do each evening, her best bet would be to use

a. a rate measure.
b. interval recording.
c. time-sample recording.
d. a topographical procedure.

ANSWER: c

77. As I watch television for a four-hour stretch one evening, I record the *number* of aggressive incidents that occur during *each* one-hour period. I am taking a(n) _____ measure of the behavior.

a. time-sample
b. interval
c. rate
d. duration

ANSWER: b

78. At the end of every 30-minute period, Sarah records whether her baby had cried at least once during that 30 minute period. She is using the method of _____ to assess the baby's tendency to cry.

a. duration recording
b. interval recording
c. time-sample recording
d. latency recording

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ANSWER: b

79. In an interval recording procedure, instances of noncompliant behavior are recorded within 4 of the 12 intervals, and no instances of noncompliant behavior are recorded within the other 8 of the 12 intervals. As a result, the level of noncompliant behavior calculated is

a. 33.3%.
b. 50%.
c. 66.7%.
d. This cannot be calculated without knowing the number of noncompliant behaviors within each interval.

ANSWER: a

80. The number of incidents of swearing occurring in each of ten 5-minute intervals is 2, 4, 0, 1, 1, 3, 2, 2, 5, 0. Using an *interval* recording procedure, the overall level of swearing calculated is:

a. 2%.
b. 20%.
c. 8%.
d. 80%.

ANSWER: d

81. In a series of twenty intervals, John bites his nails the following number of times: 2, 0, 1, 2, 0, 1, 1, 1, 0, 1, 0, 2, 1, 1, 1, 2, 2, 1, 1, 0. Using an *interval* recording procedure, the overall level of nail-biting calculated is

a. 1%.
b. 20%.
c. 100%.
d. 75%.

ANSWER: d

82. I watch television for several one-hour periods randomly dispersed throughout the month. Each time I watch it, I also make a note of whether at least one murder was depicted during that period of time. This is best described as a(n) _____ method of determining the overall depiction of homicide on television.

a. time-sample
b. duration
c. interval
d. rate

ANSWER: a

83. The judges at a high diving competition are mostly concerned with the _____ of the behavior.

a. intensity
b. rate
c. duration
d. topography

ANSWER: d

84. Learning how to write neatly is an example of a change in

a. rate.

b. speed.
c. latency.
d. topography.

ANSWER: d

85. The topography of a behavior is the
a. physical intensity of the behavior.
b. physical form of the behavior.
c. amount of time it takes to complete a behavioral episode.
d. amount of time it takes to begin a behavioral episode.

ANSWER: b

86. In a dance competition, the judges are mostly concerned with the _____ of the behavior.
a. topography
b. latency
c. duration
d. intensity

ANSWER: a

87. If a dog trainer determines whether a dog is correctly performing a complicated trick by examining the physical form of the behavior, she is measuring the behavior's _____, but if she records the number of times the dog makes a mistake, then she is measuring _____.
a. topography; intensity
b. intensity; error rate
c. topography; error rate
d. interval; error rate

ANSWER: c

88. A restaurant manager keeps track of the number of incorrect orders sent back to the kitchen. In this scenario, the manager records the
a. fault ratio.
b. error rate.
c. interval recording.
d. topography.

ANSWER: b

89. Which of the following is an acceptable rate of interobserver reliability?
a. 10%
b. 25%
c. 50%
d. 80%

ANSWER: d

90. Two researchers have watched the same video in order to determine if incidents of aggression occurred during various intervals of

time during a single day in a daycare. One researcher saw incidents of aggression in 8 out of 10 intervals, and the second researcher saw incidents of aggression in 7 out of 10 intervals. They disagreed on 1 out of the 10 intervals. What is being measured in this example?

a. Fault ratio
b. Error rate
c. Interobserver reliability
d. Topography

ANSWER: c

91. The _____ methods of research do not involve the manipulation of variables.

a. single-subject
b. experimental
c. control group
d. descriptive

ANSWER: d

92. Bird-watching is most similar to what type(s) of research?

a. Case study
b. Naturalistic observation
c. Descriptive research
d. Both b and c are correct.

ANSWER: d

93. Innate patterns of behavior in animals are often studied using the

a. naturalistic observation approach.
b. case study approach.
c. control group design.
d. single-subject design.

ANSWER: a

94. Descriptive Research Designs can be used to study

a. single examples of people with rare illnesses.
b. the adaptation of a bat trapped in a cave.
c. a case study of a musical genius.
d. All of these are correct.

ANSWER: d

95. A rare type of psychiatric disorder is most likely to be studied using the

a. naturalistic observation approach.
b. case study approach.
c. control group design.
d. comparative design.

ANSWER: b

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96. The intensive examination of a person's life both prior to and after they have experienced an unpredictable traumatic event is an example of the

a. naturalistic approach.
b. case study approach.
c. simple comparison design.
d. reversal design.

ANSWER: b

97. Problems with the descriptive research approach include

a. the possibility of oversimplifying the behavior pattern.
b. the inability to determine cause-and-effect relationships.
c. the need for sophisticated statistical analysis of the results.
d. Both b and c are correct.

ANSWER: b

98. The main advantage of experimental research over descriptive research is the ability to

a. discover salient variables.
b. apply statistical procedures to the results.
c. discover cause-and-effect relationships.
d. study the influence of dependent variables.

ANSWER: c

99. The _____ research approach is distinguished by the _____ of variables.

a. experimental; manipulation
b. experimental; systematic observation
c. descriptive; elimination
d. descriptive; manipulation

ANSWER: a

100. If we wish to discover functional relationships, we are likely to use the _____ research approach.

a. descriptive
b. experimental
c. naturalistic
d. deterministic

ANSWER: b

101. A common control procedure in a group design is

a. random assignment of subjects to groups.
b. alternating assignment of subjects to groups.
c. recording a one-week baseline period.
d. recording a two-week baseline period.

ANSWER: a

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102. In a simple group experiment on the effects of food deprivation on activity level, the control group would
a. show increased activity level.
b. show decreased activity level.
c. be subjected to food deprivation.
d. eat normally.

ANSWER: d

103. In a simple group experiment on the effects of punishment on response suppression in rats, the experimental group would
a. show decreased responding.
b. show increased responding.
c. be subjected to punishment.
d. not be subjected to punishment.

ANSWER: c

104. In a 2 x 3 factorial group design, there are
a. three treatment groups and four control groups.
b. three dependent variables and four independent variables.
c. two independent variables.
d. two dependent variables.

ANSWER: c

105. In a 2 x 2 factorial group design, there are
a. two treatment groups.
b. two independent variables and two dependent variables.
c. two independent variables.
d. two dependent variables.

ANSWER: c

106. A new teaching method is being tested on students. Three age groups of students will receive either the new method or a standard (control) method. If the new method is only effective on the youngest age group of students, you would say that there is _____between the effects of the teaching method and the effects of age.
a. no relationship
b. an interaction
c. a partial effect
d. a control effect

ANSWER: b

107. A(n) _____is a type of group design in which the species of animals within the study constitutes one of the independent variables.
a. evolutionary design
b. comparative design
c. no-treatment design
d. 2 x 2 design

ANSWER: b

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108. In which of the following studies would you expect to find a control group?
a. Case study
b. Survey
c. A factorial design
d. Naturalistic observation

ANSWER: c

109. In which of the following designs would you NOT expect to have random assignment to groups?
a. A simple-comparison design
b. A factorial design
c. A comparative design
d. None of these are correct.

ANSWER: c

110. Limitations of group designs include
a. the need for a large number of subjects.
b. an overly strong focus on individual results.
c. an inability to measure interaction effects.
d. All of these are correct.

ANSWER: a

111. Limitations of group designs include
a. little attention given to the behavior of individual subjects.
b. the need for a large number of subjects.
c. the fact that results are often interpreted only at the end of a study.
d. All of these are correct.

ANSWER: d

112. Control group designs are useful for studying
a. the behavior of one individual.
b. the average effect of a variable on a large number of individuals.
c. the potential of lifesaving medication on critically ill patients
d. Both a and c are correct.

ANSWER: b

113. Which of the following designs requires the largest number of subjects?
a. A simple-comparison design
b. A control group design
c. A reversal design
d. A multiple baseline design

ANSWER: b

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114. Single-subject designs are research designs that require
   a. random assignment of subjects to groups.
   b. sophisticated statistical analysis.
   c. only one or a few subjects.
   d. Both b and c are correct.

ANSWER: c

115. In a simple-comparison design, one compares the level of behavior in a(n) _____ with the level of behavior in a(n) _____.
   a. experimental group; control group
   b. control group; baseline group
   c. baseline group; average group
   d. baseline condition; treatment condition

ANSWER: d

116. Which of the following is a disadvantage of the single-comparison design?
   a. It requires constant monitoring of a subject's behavior throughout the experiment.
   b. It requires a large numbers of subjects to conduct an entire experiment.
   c. It requires sophisticated statistical analysis.
   d. It does not clearly demonstrate a functional relationship between the independent variable and the dependent variable.

ANSWER: d

117. We measure a child's homework completion during a week in which he is consistently rewarded for doing his homework versus the following week when he is completely ignored while doing his homework. This is an example of a _____ design.
   a. reversal
   b. simple-comparison
   c. multiple-baseline-across-time
   d. changing-criterion

ANSWER: b

118. The baseline of a behavior is the
   a. normal frequency of that behavior following an intervention.
   b. enhanced frequency of that behavior following an intervention.
   c. normal frequency of that behavior prior to an intervention.
   d. suppressed frequency of that behavior prior to an intervention.

ANSWER: c

119. Murielle has been feeling a lot better these past few weeks after she started avoiding caffeine. The procedure that Murielle has used to test the effects of caffeine is most similar to the _____ design, which is _____ for drawing firm conclusions about the effects of caffeine.
   a. simple-comparison; inadequate
   b. reversal; inadequate
   c. multiple-baseline; excellent
   d. simple-comparison; excellent

ANSWER: a

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120. The problem with a simple-comparison design is that
   a. it does not fully control for the influence of other variables.
   b. it is insufficient for demonstrating a clear functional relationship.
   c. the independent variable cannot be manipulated.
   d. Both a and b are correct.

ANSWER: d

121. A(n) _____ design involves repeated alternations between a baseline condition and a treatment condition.
   a. multiple-baseline
   b. ABAB
   c. changing-criterion
   d. Both b and c are correct.

ANSWER: b

122. A reversal design is sometimes also called an
   a. AB design
   b. ABA design
   c. ABAB design
   d. Both b and c are correct.

ANSWER: d

123. If I want to convince someone that his habit of watching exciting television shows each evening is causing his insomnia, it would be best to use which type of experimental design?
   a. A changing-criterion design
   b. A reversal design
   c. A multiple-baseline across-persons design
   d. A simple-comparison design

ANSWER: b

124. For a reversal design to clearly demonstrate the effectiveness of a certain treatment, the behavior must
   a. return to its original baseline level during the second baseline phase.
   b. remain at the treatment level during the second baseline phase.
   c. remain at the baseline level during the treatment phase.
   d. Both b and c are correct.

ANSWER: a

125. In a reversal design, the level of behavior in the first A phase needs to be _____ the level of behavior in the second A phase in order to prove that the treatment is effective.
   a. greater than
   b. less than
   c. the same as
   d. supplementary to

ANSWER: c

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126. A reversal design that is conducted across four different subjects
   a. constitutes four separate experiments.
   b. constitutes only one experiment.
   c. constitutes two separate experiments.
   d. is inadequate in the absence of a control group.

ANSWER: a

127. Dr. Alvarez is treating Marcus for a behavioral problem. First she records a baseline level of the behavior for several days. The rate of the behavior is quite high. Next she implements a behavior modification program based on punishment. When that approach has little success in reducing the behavior, she tries a second program based on reinforcement. The second treatment appears to work and the behavior is dramatically reduced. She then goes back to baseline and the behavior reverts back to pre-treatment levels. When Dr. Alvarez once again implements the second treatment method, the behavior goes away. This is an example of
   a. an ABBAB design.
   b. an ABCAC design.
   c. an unsuccessful simple comparison design.
   d. a multiple-baseline design.

ANSWER: b

128. A reversal design may be inappropriate when
   a. the behavior is expected to change quickly.
   b. the change in behavior may be irreversible.
   c. Both a and b are correct.
   d. Neither a nor b is correct.

ANSWER: b

129. In treating a child for a tendency to attack other children, the most ethically problematic design to test the effectiveness of treatment would be a(n) _____ design.
   a. multiple-baseline across behaviors
   b. multiple-baseline across settings
   c. simple-comparison
   d. ABAB

ANSWER: d

130. Which would be the most ethically problematic design for assessing a treatment procedure that seems to suppress Bob's tendency to attack other patients in the ward?
   a. An ABAB design
   b. A simple-comparison design
   c. A multiple-baseline-across-persons design
   d. A multiple-baseline-across-behaviors design

ANSWER: a

131. In a multiple-baseline design, the treatment is implemented at different points in time across different
   a. behaviors.
   b. situations.

c. persons.
d. All of these are correct.

ANSWER: d

132. Ivan creates a treatment program to alter his family's tendency to swear at him. He first applies the program to his sister, then to his mother, and finally to his father. What type of research design is he employing to measure his family's improvement?

a. A multiple-baseline-across-behaviors design
b. A multiple-baseline-across-persons design
c. A reversal design across settings
d. A reversal design across behaviors

ANSWER: b

133. If you were testing a behavioral treatment for eliminating a severe addiction in a small group of patients, the most appropriate and ethical design would be a(n) _____ design.

a. multiple-baseline-across-persons
b. control group
c. ABAB
d. ABA

ANSWER: a

134. Jonathan decides to reduce his tendency to crack his knuckles, first at home and then at school. What type of research design is he employing to measure his improvement?

a. A multiple-baseline-across-behaviors design
b. A multiple-baseline-across-settings design
c. A reversal design across settings
d. A reversal design across behaviors

ANSWER: b

135. Bruce decides to first reduce his tendency to smack his lips, then his tendency to spit on the road, and then finally his tendency to swear. What type of research design is he employing to measure his improvement?

a. A multiple-baseline-across-behaviors design
b. A multiple-baseline-across-settings design
c. A simple-comparison design
d. A changing-criterion design

ANSWER: a

136. In a changing-criterion design, one looks to see whether the behavior

a. matches a particular standard that is being systematically altered.
b. fluctuates between alternating baseline and treatment conditions.
c. changes as the treatment is applied to some other behavior.
d. is in some manner irreversible.

ANSWER: a

137. What single-subject design can establish the existence of a cause-and-effect relationship and does not require a reversal to

baseline?

a. A simple comparison design
b. A multiple-baseline-across-persons design
c. A changing-criterion design
d. Both b and c are correct.

ANSWER: d

138. If the intent of your program is to gradually increase the amount of weight you lift each day, the most appropriate design for measuring your improvement would probably be a _____ design.

a. multiple-baseline
b. simple comparison
c. changing-criterion
d. reversal

ANSWER: c

139. The most appropriate design for slowly increasing the amount of running that you do each day would be a

a. changing-criterion design.
b. simple-comparison design.
c. multiple-baseline design.
d. reversal design.

ANSWER: a

140. A _____ design is most appropriate for situations in which a behavior is expected to change gradually.

a. multiple-baseline-across-persons
b. reversal
c. simple-comparison
d. changing-criterion

ANSWER: d

141. Youcef sets up an exercise program in which he will try to gradually increase the number of push-ups he does each day. The most appropriate design for assessing the effectiveness of his program would be a

a. multiple-baseline design.
b. changing-criterion design.
c. reversal design.
d. simple-comparison design.

ANSWER: b

142. Advantages of using animals in behavioral research include the ability to

a. control genetic differences.
b. control learning history.
c. control the experimental environment.
d. All of these are correct.

ANSWER: d

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143. Which of the following is a reason for researchers choosing to conduct behavioral research on animals?
   a. To control the experimental environment
   b. To control learning history
   c. To control genetic differences
   d. All of these are correct.

ANSWER: d

144. Which of the following is a criticism against using animals in psychological research?
   a. Memory is more difficult to control in animals than in humans.
   b. Animals are too different from humans for the research to be of much relevance.
   c. Neither a nor b is correct.
   d. Both a and b are correct.

ANSWER: b

145. The most cited criticism against animal research is that
   a. it is difficult to assess the animals' learning history .
   b. animals can't talk and therefore can't communicate.
   c. it is morally wrong.
   d. Both b and c are correct.

ANSWER: c

146. During conditioning experiments involving food rewards, pigeons are often food deprived to the point where they are at
   a. 80-85% of their free-feeding weight.
   b. 90-95% of their natural weight.
   c. 80-85% of their natural weight.
   d. 90-95% of their free-feeding weight.

ANSWER: a

147. To ensure that pigeons are strongly motivated to respond for food, they are generally
   a. food deprived for at least 12 hours prior to each session.
   b. kept at starvation level.
   c. kept at 80-85% of their free-feeding weight.
   d. Both b and c are correct.

ANSWER: c

148. Regarding the extent to which food deprivation of pigeons is ethical versus unethical, it is argued that
   a. their deprived weights are actually close to their natural weights.
   b. food restriction appears to increase an animal's sensitivity to pain.
   c. a certain degree of food restriction is actually healthy.
   d. Both a and c are correct.

ANSWER: d

149. Any characteristic of a person, place, or thing that can change can be called a(n) _____.

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ANSWER: variable

150. In a classical conditioning experiment, one group of dogs first hears a tone and then receives food, while another group of dogs receives food and then hears a tone. Following this, the researcher measures how much the dogs in each group salivate when they simply hear the tone. In this experiment, the order in which tone and food are presented is the _____ variable, while the amount of salivation to the tone is the _____ variable.
ANSWER: independent; dependent

151. Each time it rains, I see an increased number of umbrellas on the street. There appears to be a(n) _____ relationship between the weather and the appearance of umbrellas.
ANSWER: functional

152. A knife and spoon are placed side by side in a dinner setting creating spatial _____ between the two utensils.
ANSWER: contiguity

153. You have just eaten a very large pizza. It is likely that the reward value of eating a pizza has now (increased/decreased) _____ as a function of _____.
ANSWER: decreased; satiation

154. Robbie is afraid of spiders while Naseem finds them interesting. A spider is a(n) _____ stimulus to Robbie, and a(n) _____ stimulus to Naseem.
ANSWER: aversive; appetitive

155. The number of cigarettes smoked each week is a(n) _____ measure of smoking.
ANSWER: rate

156. Using a(n) _____ recording procedure, a school psychologist drops into a classroom for a 10-minute period four times each day and notes whether some type of disruption occurs during the time that he is there.
ANSWER: time-sample

157. An ABCAC design is a type of _____ design.
ANSWER: reversal

158. The reversal design is also known as a(n) _____ design.
ANSWER: ABAB or ABA

159. After Trish told Jennifer that Lorne was the most popular guy in school, Jennifer became extremely interested in him. Trish's statement about Lorne apparently functioned as a(n) _____ that increased Lorne's value as a(n) _____ stimulus.
ANSWER: establishing operation; appetitive

160. On a cumulative recorder, a gradually sloping line indicates a(n) _____ rate of response while a steep line indicates a(n) _____ rate of response. By contrast, a(n) _____ line indicates no response.
ANSWER: low; high; flat

161. The amount of time it takes Zak to read a chapter is a(n) _____ measure of behavior, while the amount of time it took him to begin reading the chapter is a(n) _____ measure of behavior. By contrast, the total amount of time he spends reading each day is a(n) _____ measure of behavior.

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ANSWER: speed; latency; duration

162. I wish to test a new drug which I believe will permanently remove the symptoms of a rare neurological disorder. Unfortunately, only three patients who suffer from the disorder have volunteered to take the drug. In this scenario, _____ design would be the most ethical and effective at demonstrating the effectiveness of this drug.

ANSWER: multiple-baseline (across persons) design

163. Being quite addicted to computer games, Jules decides to implement a program to gradually reduce the amount of time that she spends playing these games. A useful design for determining if her program is successful would be a(n) _____ design.

ANSWER: changing-criterion

164. We easily associate a table and a chair because there is often close spatial _____ between the two items.

ANSWER: contiguity

165. The number of fish caught each hour during a fishing trip each week would constitute a(n) _____ measure of catching fish.

ANSWER: rate

166. Nina loves beans; Jana hates beans. Beans are a(n) _____ stimulus to Nina and a(n) _____ stimulus to Jana.

ANSWER: appetitive; aversive

167. Distinguish between independent and dependent variables. What is a functional relationship?

ANSWER: Answers will vary.
Feedback:The *independent variable* is the aspect of an experiment that systematically varies across the different conditions in the experiment. The *dependent variable* is the aspect of an experiment that is allowed to freely vary to see if it is affected by changes in the independent variable. A *functional relationship* is the relationship between changes in an independent variable and changes in a dependent variable.

168. Define stimulus and response. Differentiate between the terms *stimulus* and *stimuli*.

ANSWER: Answers will vary.
Feedback:A *stimulus* is any event that can potentially influence behavior while a *response* is a particular instance of a behavior. The term *stimuli* is the plural form of *stimulus*.

169. Distinguish between overt and covert behavior. Distinguish between appetitive and aversive stimuli.

ANSWER: Answers will vary.
Feedback: *Overt behavior* is behavior that has the potential for being directly observed by an individual other than the one performing the behavior. *Covert behavior* is behavior that can be subjectively perceived only by the person performing the behavior. An *appetitive stimulus* is an event that an organism will seek out. An *aversive stimulus* is an event that an organism will avoid.

170. Define a motivating operation. Name and describe two types of motivating operations.

ANSWER: Answers will vary.
Feedback: A *motivating operation* is a procedure that affects the appetitiveness or aversiveness of an event. There are two types of motivating operations: establishing operations and abolishing operations. An establishing operation is a procedure that increases the appetitiveness or aversiveness of an event, and an abolishing operation is a procedure that decreases the appetitiveness or aversiveness of an event.

171. Distinguish between contiguity and contingency. Name and define two types of contiguity.

ANSWER: Answers will vary.
Feedback: *Contiguity* means closeness or nearness. A *contingency* is a dependent relationship between two events; that is, the occurrence of one event is dependent on another. *Temporal contiguity* is the extent to which events occur

close together in time. *Spatial contiguity* is the extent to which events are situated close to each other in space.

172. Define rate of response. Why is rate of response a particularly favored measure of behavior among radical behaviorists? Include an example.

ANSWER: Answers will vary.
Feedback: *Rate of response* is the frequency with which a response occurs in a certain period of time. Rate is a very sensitive measure of behavior and is thus highly favored by some behaviorists (especially radical behaviorists). The number of words written in a one-hour writing session is an example of rate measure of behavior.

173. How does one distinguish a high rate of response versus a low rate of response versus a period of no response on a cumulative record?

ANSWER: Answers will vary.
Feedback: A steep line indicates a high rate of response, a shallow line indicates a low rate of response, and a flat line indicates a period of time with no response.

174. Define speed, duration, and latency measures of behavior, and give a clear example of each.

ANSWER: Answers will vary.
Feedback: *Speed* is the amount of time required to perform a complete episode of a behavior from start to finish. For example, the length of time it takes for a rat to run through a maze from the start box to the goal box is a measure of speed. *Duration* is the length of time that an individual repeatedly or continuously performs a certain behavior. For example, this measure is appropriate when a student attempts to increase the amount of time he spends studying each week as well as decrease the amount of time spent watching television. The *latency* of a behavior is the length of time required for the behavior to begin. The number of days it takes for a student to begin working on a term paper after it has been assigned is an example of latency measure.

175. Define the intensity and topography of a behavior, and give a clear example of each.

ANSWER: Answers will vary.
Feedback: The *intensity* of a behavior is the force or magnitude of the behavior. For example, in Pavlov's classical conditioning procedure with dogs, the strength of conditioning was typically measured as the amount (magnitude) of saliva produced whenever the tone was presented by itself. *Topography* is the exact physical form of a behavior. For example, it is the topography of a behavior that is measured when one teaches a child how to dress appropriately, write neatly, and brush his teeth properly.

176. Define interval recording and time-sample recording, and give a clear example of each. Specify how the overall measure of behavior is calculated.

ANSWER: Answers will vary.
Feedback: In *interval recording*, one measures whether or not a behavior occurs during each interval within a series of *continuous* intervals. For example, if we wish to measure the amount of aggressive behavior in a classroom, we might make a video record of several hours of class time. We would then have observers view the video and note whether or not an aggressive incident occurred within each successive 10- minute interval. In *time-sample recording*, one measures whether or not a behavior occurs during each interval within a series of *discontinuous* intervals. For example, to assess the level of aggression in a classroom, we might have an observer unobtrusively enter the classroom for a 10-minute interval at the start of each half hour and record whether at least one aggressive incident occurred during that interval. The overall measure of behavior is calculated as the percentage of intervals within which the behavior occurred.

177. How does one calculate the reliability of observations conducted with an interval recording procedure? Illustrate your answer with an example.

ANSWER: Answers will vary.
Feedback: To ensure the reliability of observations conducted with an interval recording procedure, two or more individuals independently observe the behavior being studied. Interobserver reliability is then calculated as the number of intervals during which the observers agree divided by the total number of intervals that were observed. For

example, in an interval recording procedure in which two observers independently record the occurrence of aggression in each of 12 consecutive intervals, they may agree on whether or not an incident occurred in 10 of the intervals and disagree in 2 of the intervals. In this case, interobserver reliability will be 10/12 = 83.3% which is higher than the minimum required (80%) but lower than the ideal interobserver reliability (90%).

178. Name and describe two types of descriptive research methods. What is a major limitation of descriptive research methods?

ANSWER: Answers will vary.
Feedback: *Naturalistic observation* involves the systematic observation and recording of behavior in its natural environment. The *case study approach* involves the intensive examination of one or a few individuals.

Although descriptive research methods often provide detailed information about behavior, they usually do not allow us to draw firm conclusions about the causes of a behavior. (Note: For the second part of this question, some students might instead mention the problem of researcher bias which tends to stand out in the discussion of the case study approach.)

179. Describe the simplest form of a control group design. How are subjects assigned to the different conditions, and why is this done?

ANSWER: Answers will vary.
Feedback: In a *control group design*, subjects are assigned to either an experimental (or treatment) group or a control group. Subjects assigned to the experimental group are exposed to a certain manipulation or treatment while those assigned to the control group are not. Subjects are often *randomly* assigned to each condition to ensure that different characteristics of the subjects are likely to be evenly distributed across the experimental and control conditions.

180. What is comparative design and when is it used?

ANSWER: Answers will vary.
Feedback: *Comparative design* is a type of control group design in which the species of animal used is one of the independent variables. It is often used to test an evolutionary hypothesis regarding the differences in selective pressures for a particular trait between species.

181. What are three limitations of control group designs?

ANSWER: Answers will vary.
Feedback: Control group designs have three main limitations. They require a large number of subjects, they focus on the average performance of all subjects (and thus ignore the performance of individuals), and results are often analyzed and interpreted only at the end of an experiment rather than throughout the study.

182. What are single-subject designs? Describe a simple-comparison design. In what sense is it a "flawed" design?

ANSWER: Answers will vary.
Feedback: *Single-subject designs* are research designs that require only one or a few subjects to conduct an entire experiment. In a *simple-comparison design*, behavior in a baseline condition is compared to behavior in a treatment condition. The major problem with the simple-comparison design is that it does not control for the possibility that some other event occurred at the same time that the treatment was implemented, and it was this other event that caused the change in a behavior.

183. Describe a reversal design. What are three disadvantages with this type of design?

ANSWER: Answers will vary.
Feedback: A *reversal design* is a type of single-subject design that involves repeated alternations between a baseline period and a treatment period.
The first disadvantage is that the design requires that behavior must revert to its original baseline frequency when the treatment is withdrawn; otherwise, it will be impossible to determine if the treatment has had an effect. Second, a reversal design would not be appropriate for assessing the effect of an intervention that is intended to have permanent effects. Third, it may be ethically inappropriate to remove a treatment (during a reversal phase) once some improvement has been obtained.

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184. Describe a multiple-baseline design. What are the two limitations of this type of design?

ANSWER: Answers will vary.

Feedback: In a *multiple-baseline design*, a treatment is instituted at successive points in time for two or more persons, settings, or behaviors.

This design is limited in that we need to have more than one person, setting, or behavior to which the treatment can be applied. The treatment effect might also generalize across behaviors or settings prior to the treatment being instituted in those behaviors or settings, which would make it difficult to interpret treatment effectiveness.

185. Describe a changing-criterion design. How can it be strengthened? For what types of situations is this design appropriate?

ANSWER: Answers will vary.

Feedback: In a c*hanging-criterion design*, the effect of a treatment is demonstrated by the extent to which a behavior matches a criterion that is systematically altered. It can be strengthened by including periods in which the criterion suddenly changes in the opposite direction. The design is most appropriate for situations in which the behavior is intended to change gradually by some specified amount.

186. List four advantages and two disadvantages of using animals as subjects in behavioral research.

ANSWER: Answers will vary.

Feedback: Two advantages of using animals in research are the ability to control their genetic make-up and their learning history. A third advantage to using animals as subjects is that researchers are often able to more strictly control the experimental environment for animals than for humans. A fourth reason for using animals in behavioral research has to do with the fact that some research cannot ethically be conducted with humans.

One criticism is that because animals are not humans, the findings from animal research necessarily have limited applicability to humans. Perhaps the most fundamental criticism of animal research is that it is morally wrong and that animals have "rights" similar to humans.

187. Give examples of rate, latency, and speed measures for the behavior of studying.

ANSWER: Answers will vary.

Feedback: A rate measure of studying could involve the number of math problems solved, the number of pages read, or the number of pages of study notes taken per hour. A latency measure of studying could involve how long it takes one to begin studying each evening or how long it takes one to return to studying following a break (which may be a particular problem for some students). A speed measure of studying could be the time it takes one to complete, say, five math problems or to read 20 pages in the text.

188. Imagine that you are carrying out a study, using a 2 x 2 factorial design that looks at the effect of a vitamin C supplement on hyperactive behavior in both male and female children. Specify the dependent and independent variables and the number of groups needed. Create a table similar to Table 2.1 in the text that outlines the various experimental conditions. What would be an example of an interaction effect in such a study?

ANSWER: Answer will vary.

Feedback: Hyperactivity is the dependent variable while vitamin C and gender are the independent variables. There will be four groups of subjects needed. The design can be tabled as follows:

	Male	Female
Vitamin C	VCM	VCF
No Vitamin C	NVCM	NVCF

where VC =vitamin C; NVC-no vitamin C; M=male; F=female

An example of an interaction effect would be if vitamin C has an effect on female children only.

189. Describe a two-treatment reversal design involving the effect of drug X and drug Y on hyperactivity. Include a graph of some hypothetical results for such an experiment. What would be the specific label for your design (in terms of ABCs)?

ANSWER: Answers will vary.

Feedback: To use an example similar to that given in the text, following a baseline period, the drug X treatment is implemented. When this proves ineffective in reducing the level of hyperactivity, drug Y treatment is implemented. When this proves effective, drug Y is later withdrawn in the return to baseline and then reinstituted in the return to treatment. This would then be called an ABCAC design. The graph for this design would look similar to Figure 2.5 in

the text. (Note: Other designs are also possible. For example, one could conduct an ABCBCA design in which the two drugs are alternated back and forth between each other. This would be useful if both drugs are effective and we wish to determine whether one is more effective than the other. A graph for this study would, of course, have six different phases involving alternations between the two drugs and the two treatments).