PSY 250 Exam 3 Sample Questions

\_\_\_\_ 23. In a \_\_\_\_ design, the researcher does not have control over which individuals are assigned to which group.

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| a. | between-subjects experiment |
| b. | within-subjects experiment |
| c. | nonequivalent group design |
| d. | pre-post design |

\_\_\_\_ 24. The concept of *nonequivalent groups* means

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| a. | the researcher cannot control which people go into each group and cannot ensure that the groups are equivalent. |
| b. | the two groups have completely different characteristics. |
| c. | the researcher has randomly assigned people to groups so there is no guarantee that the groups are equal. |
| d. | the number of participants is different from one group to another. |

\_\_\_\_ 25. A researcher introduces a new mathematics program in one school district and uses a neighboring district as a no-treatment control group. After the program is in place for 6 months, the researcher intends to give the students in both districts a standardized mathematics test and then compare their scores. Which of the following is the best identification for this study?

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| a. | nonequivalent group design |
| b. | posttest-only nonequivalent control group design |
| c. | pretest-posttest nonequivalent control group design |
| d. | time-series design |

\_\_\_\_ 26. The pre-post designs are similar to within-subjects designs, however in a pre-post design it is impossible to

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| a. | randomly assign participants. |
| b. | counterbalance order of treatments. |
| c. | control for differential effects. |
| d. | generalize the results. |

\_\_\_\_ 27. A design that includes a series of observations both before and after a treatment is administered to one group of participants is called

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| a. | an experiment. |
| b. | a pretest-posttest nonequivalent control group design. |
| c. | an interrupted time-series design. |
| d. | a time-series design |

\_\_\_\_ 28. A researcher records participants' weights every Friday for three weeks prior to administering a diet education program and for three weeks following the program. This study is an example of

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| a. | a time-series design. |
| b. | an interrupted time-series design. |
| c. | a cross-sectional design |
| d. | a longitudinal design. |

\_\_\_\_ 29. Last year the state increased the speed limit on one section of highway from 55 to 65 mph. To evaluate the effect of the change, a researcher gathered accident reports for six months before the change and for six months after the change. This is an example of

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| a. | a time-series design. |
| b. | an interrupted time-series design. |
| c. | a cross-sectional design. |
| d. | a longitudinal design. |

\_\_\_\_ 30. A research study that evaluates developmental changes by examining different groups of individuals representing different ages, is called

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| a. | a time-series design. |
| b. | an interrupted time-series design. |
| c. | a cross-sectional design. |
| d. | a longitudinal design. |

\_\_\_\_ 31. A research study that evaluates developmental changes by examining the same group of individuals at different times in their lives is called

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| a. | a time-series design. |
| b. | an interrupted time-series design. |
| c. | a cross-sectional design. |
| d. | a longitudinal design. |

\_\_\_\_ 32. How many independent variables are there in an experimental two-factor design?

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| a. | 1 |
| b. | 2 |
| c. | 3 |
| d. | 4 |

\_\_\_\_ 33. A research study comparing problem solving scores obtained under three different levels of temperature would be called a \_\_\_\_.

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| a. | single-factor design |
| b. | two-factor design |
| c. | three-factor design |
| d. | factorial design |

\_\_\_\_ 34. In a 3 X 2 X 2 factorial design, how many levels of the third factor are there?

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| a. | 2 |
| b. | 3 |
| c. | 4 |
| d. | 8 |

\_\_\_\_ 35. The advantage of using a two-factor design rather than two single factor designs is to

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| a. | save time. |
| b. | find an interaction between the independent variables. |
| c. | find the main effects. |
| d. | check the manipulation. |

\_\_\_\_ 36. In a matrix representing the structure of a factorial design, the differences between the overall column means define

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| a. | the main effect for one factor. |
| b. | the interaction between the factors. |
| c. | the main effect and the interaction between the factors. |
| d. | nothing. |

\_\_\_\_ 37. How many main effects are there in a 2 X 2 X 2 factorial design?

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| a. | 2 |
| b. | 3 |
| c. | 6 |
| d. | 8 |

\_\_\_\_ 38. In a factorial design, an interaction between the factors occurs whenever

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| a. | the mean differences between the cells are not explained by the main effects. |
| b. | the mean differences between the cells are explained by the main effects. |
| c. | there are differences between the overall column means. |
| d. | there are differences between the overall row means. |

\_\_\_\_ 39. If the means for a two-factor study are displayed in a graph and the lines in the graph are perfectly parallel, then what can you conclude about the main effects and interaction?

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| a. | There is no main effect for either of the two factors. |
| b. | There is a main effect for both of the two factors. |
| c. | There is no interaction between factors. |
| d. | There is an interaction between factors. |

\_\_\_\_ 40. The warning label on a blood-pressure medication states that the medicine should be taken between meals because the presence of food in the stomach modifies the effect of the medicine. If the effects of the medicine were evaluated in a two-factor study comparing food versus no food (factor 1), and medicine versus no medicine (factor 2), then what pattern of main effects and interaction should appear in the data?

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| a. | There should be a main effect for both factors and an interaction. |
| b. | There should be a main effect for both factors but no interaction. |
| c. | There should be no main effect for either factor but there should be an interaction. |
| d. | You cannot predict the main effects but there definitely should be an interaction. |

\_\_\_\_ 41. A clinician claims that the effectiveness of a new treatment varies depending on the gender of the client. Specifically, the new treatment has been shown to be very effective for females, but the treatment has little or no effect for males. In this example,

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| a. | there is an interaction between the treatment and client's gender. |
| b. | there is no interaction between the treatment and client's gender. |
| c. | there is no main effect of treatment. |
| d. | there is no main effect of gender. |

\_\_\_\_ 42. The goal of the correlational research strategy is

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| a. | to examine and describe the relationship between variables. |
| b. | to examine and describe the causal relationship between variables. |
| c. | to describe an individual person or patient in great detail. |
| d. | to describe a variable (or variables) as they exist naturally. |

\_\_\_\_ 43. In a correlational study, commonly,

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| a. | one variable is measured. |
| b. | two variables are measured. |
| c. | one individual is described in great detail. |
| d. | one individual is treated. |

\_\_\_\_ 44. A researcher watches children on a playground to obtain measurements of their level of activity. Then the researcher watches the children's caregivers on the playground to obtain measurements of their level of verbal reprimanding of children. The researcher hopes to demonstrate that the caregivers verbal reprimanding is related to children's activity level. This researcher is using the

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| a. | descriptive research strategy. |
| b. | correlational research strategy. |
| c. | experimental research strategy. |
| d. | scientific research strategy. |

\_\_\_\_ 45. A college professor reports that students who finish exams early tend to get better grades than students who hold on to exams until the last possible moment. The correlation between exam score and amount of time spent on the exam is an example of

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| a. | a positive correlation. |
| b. | a negative correlation. |
| c. | a correlation near zero. |
| d. | a correlation near one. |

\_\_\_\_ 46. A negative value for a correlation indicates \_\_\_\_.

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| a. | a much stronger relationship than if the correlation were positive |
| b. | a much weaker relationship than if the correlation were positive |
| c. | increases in X tend to be accompanied by increases in Y |
| d. | increases in X tend to be accompanied by decreases in Y |

\_\_\_\_ 47. The Spearman correlation measures

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| a. | the degree to which the relationship is consistently one directional. |
| b. | the degree of linear relationship. |
| c. | the degree of curvilinear relationship. |
| d. | the degree of monotonic relationship. |

\_\_\_\_ 48. A professor reports that the final grades for her students are almost perfectly predicted by their scores on the first exam. The correlation between scores on the first exam and final grades is an example of

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| a. | a positive correlation. |
| b. | a negative correlation. |
| c. | a correlation near zero. |
| d. | a correlation near one. |

\_\_\_\_ 49. When students apply to colleges, they usually are required to submit SAT scores along with their applications. College officials know that there is a good relationship between scores on the SAT and success in college. In this situation, success in college is the

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| a. | predictor variable. |
| b. | criterion variable. |
| c. | dependent variable. |
| d. | independent variable. |

\_\_\_\_ 50. The results from a correlational study show a positive relationship between aggressive behavior for 6-year-old children and the amount of violence they watch on television. Based on this relationship, which of the following conclusions is justified?

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| a. | Decreasing the amount of violence that the children see on TV will reduce their aggressive behavior. |
| b. | Increasing the amount of violence that the children see on TV will increase their aggressive behavior. |
| c. | Children who watch more TV violence tend to exhibit more aggressive behavior. |
| d. | All of the other options are justified conclusions. |

\_\_\_\_ 51. A researcher reports an inverse relationship between weight and exercise level for a group of 8-year-old children (greater weight is associated with less exercise). However, the researcher suspects that the children's rate of metabolism may be responsible for the relationship. That is, children with higher metabolism exercise more and weigh less than children with lower metabolism. This is an example of

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| a. | the third-variable problem. |
| b. | the directionality problem. |
| c. | the reversal problem. |
| d. | the criterion problem. |

\_\_\_\_ 52. A researcher reports a positive relationship between sugar consumption and activity level for a group of 8-year-old children. However, the researcher cannot be sure whether the extra sugar is causing the children to be more active or whether the extra activity is causing the children to eat more sugar. This is an example of

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| a. | the third-variable problem. |
| b. | the directionality problem. |
| c. | the reversal problem. |
| d. | the criterion problem. |

\_\_\_\_ 53. In the observational study of adolescents at the mall, you count the number of social interaction behaviors that occur within a given time interval. This is an example of the \_\_\_\_ method of quantifying behavior.

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| a. | frequency |
| b. | duration |
| c. | interval |
| d. | behavior counting |

\_\_\_\_ 54. In an observational study of autistic children, you record how much time each child spends playing alone during a 30 minute observation period. This is an example of the \_\_\_\_ method of quantifying behavior.

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| --- | --- |
| a. | frequency |
| b. | duration |
| c. | interval |
| d. | behavior counting |

\_\_\_\_ 55. A researcher watches children on a playground to obtain measurements of their level of aggression. This researcher is using

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| a. | naturalistic observation. |
| b. | participant observation. |
| c. | contrived observation. |
| d. | unstructured observation. |

\_\_\_\_ 56. A researcher joins a religious cult in order to observe their behaviors. This researcher is using

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| --- | --- |
| a. | naturalistic observation. |
| b. | participant observation. |
| c. | contrived observation. |
| d. | unstructured observation. |

\_\_\_\_ 57. In general, behavioral observation is very time consuming. However, this problem is greatly reduced by using

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| a. | participant observation. |
| b. | naturalistic observation. |
| c. | contrived observation. |
| d. | case study research. |

\_\_\_\_ 58. A drawback to an open-ended question is that

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| a. | the responses obtained may be difficult to code and analyze. |
| b. | it is more difficult to construct than other types of items. |
| c. | it may place too many restrictions on the participant's response. |
| d. | the other three choices are all drawbacks. |

\_\_\_\_ 59. What type of question allows participants the greatest flexibility in deciding how to answer?

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| a. | open-ended |
| b. | restricted |
| c. | rating scale |
| d. | physiological |

\_\_\_\_ 60. *Nonresponse bias* is a problem associated primarily with surveys administered

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| a. | by mail. |
| b. | by telephone. |
| c. | in person to groups. |
| d. | in person to individuals. |

\_\_\_\_ 61. In general, the case study design tends to have

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| a. | high internal validity and low external validity. |
| b. | high internal validity and high external validity. |
| c. | low internal validity and high external validity. |
| d. | low internal validity and low external validity. |

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**Answer Section**

23. ANS: C REF: 251

24. ANS: A REF: 252

25. ANS: B REF: 254-256

26. ANS: B REF: 258

27. ANS: D REF: 259

28. ANS: A REF: 259 OBJ: www

29. ANS: B REF: 259

30. ANS: C REF: 264

31. ANS: D REF: 268

32. ANS: B REF: 276

33. ANS: A REF: 276 OBJ: www

34. ANS: A REF: 277

35. ANS: B REF: 277

36. ANS: A REF: 278 OBJ: www

37. ANS: B REF: 293

38. ANS: A REF: 278 OBJ: www

39. ANS: C REF: 283

40. ANS: D REF: 281

41. ANS: A REF: 282

42. ANS: A REF: 308

43. ANS: B REF: 308

44. ANS: B REF: 308 OBJ: www

45. ANS: B REF: 310

46. ANS: D REF: 310 OBJ: www

47. ANS: D REF: 311 OBJ: www

48. ANS: D REF: 311

49. ANS: B REF: 314

50. ANS: C REF: 316

51. ANS: A REF: 316

52. ANS: B REF: 317

53. ANS: A REF: 325

54. ANS: B REF: 325

55. ANS: A REF: 328

56. ANS: B REF: 328

57. ANS: C REF: 330

58. ANS: A REF: 333

59. ANS: A REF: 333

60. ANS: A REF: 339

61. ANS: D REF: 346