

## HONORS PSYCHOLOGY | REVIEW QUESTIONS

*The purpose of these review questions is to help you assess your grasp of the facts and definitions covered in your textbook. Knowing facts and definitions is necessary (but not sufficient) for success on formal exams, which assess your ability to conceptualize and analyze the material covered in textbook and lecture. An answer key is provided at the end of these review questions so you can check your answers.*

1. Around the “beginning of the 20th century” in Germany, a horse named Clever Hans showed himself able to communicate correct answers to any questions he was asked, in any language. Who besides Hans's owner was convinced of the horse's intellectual abilities?
  - A) no one
  - B) the general public but not the scientific community
  - C) only a few isolated scientists who were predisposed to believe in animal intelligence and let themselves be fooled by the owner's tricks
  - D) many scientists, including a number of eminent zoologists and psychologists
2. What accounts for the ability of the horse named Clever Hans to answer correctly the questions he was asked?
  - A) The horse was trained with flash cards and other mechanistic teaching devices.
  - B) The horse learned to respond to the secret signals he was deliberately taught.
  - C) The horse learned to respond to movements made unconsciously by his questioner and audience.
  - D) The horse was simply an exceptional animal whose unusual intelligence could never be explained scientifically.
3. The psychologist Oskar Pfungst discovered the source of Clever Hans's intellectual abilities by:
  - A) comparing the behavior of Clever Hans to that of other horses.
  - B) calling in several experts in animal behavior.
  - C) conducting experiments in which he controlled what the horse could and could not see.
  - D) convincing the horse's owner to reveal the truth.
4. Pfungst drew a testable hypothesis from his theory:
  - A) that von Osten was lying.
  - B) that Hans was guided by visual cues from onlookers.
  - C) that Hans defied science.
  - D) that scientists could not prove how the horse learned the skills.

5. What enabled the psychologist Oskar Pfungst to solve the mystery of Clever Hans?
- A) Pfungst's knowledge of clinical psychology enabled him to convince the owner to publicly confess the fraud.
  - B) Pfungst approached the owner's claim as a hypothesis to be disproved.
  - C) Pfungst found that the horse's owner had previously tried to make fraudulent claims for monetary gain.
  - D) Pfungst's knowledge of physiological psychology allowed him to discover that electrodes had been implanted in the horse's brain to control leg and head movements.
6. What is the name for a prediction that is derived from a theory?
- A) hypothesis
  - B) fact
  - C) correlation
  - D) observation
7. Which of the following best defines a scientific theory?
- A) an objective statement, usually based on direct observation, that reasonable observers agree is true
  - B) in psychology, it usually takes the form of particular behaviors, or patterns of behavior, in animals or humans
  - C) an idea or mental model designed to explain existing facts and make specific predictions
  - D) the specific predictions based on facts that have already been determined
8. A \_\_\_\_\_ is a model used to explain observations and make predictions, whereas a \_\_\_\_\_ is a prediction that can be tested to determine its accuracy.
- A) fact; theory
  - B) theory; fact
  - C) theory; hypothesis
  - D) hypothesis; theory
9. Which of the following best expresses the relationships among facts, hypotheses, theories, and experimental testing in science?
- A) facts → theories → hypotheses → tests → more facts
  - B) hypotheses → theories → facts → tests → observations
  - C) theories → tests → predictions → hypotheses → facts
  - D) facts → tests → observations → theories → hypotheses

10. Which of the following terms best fits the definition of an idea, or a conceptual model, that is designed to make predictions about new facts that might be discovered?
- A) theory
  - B) fact
  - C) hypothesis
  - D) bias
11. Pfungst revealed the real basis for Clever Hans's performance by identifying the circumstances under which Hans could and could not respond correctly to questions. The lesson most directly illustrated by this approach is the value of:
- A) observer-expectancy effects.
  - B) subject-expectancy effects.
  - C) naturalistic observation.
  - D) careful observation under controlled conditions.
12. As Pfungst clearly showed, Clever Hans's seemingly astounding performance was actually the result of:
- A) drawing causal conclusions from correlational data.
  - B) measurement bias.
  - C) observer-expectancy effects.
  - D) using an inappropriate data-collection method.
13. In science, skepticism means:
- A) refusing to believe a claim that contradicts prior evidence.
  - B) looking for alternative explanations and evidence that could disprove claims, even one's own.
  - C) making careful observations and recording them accurately.
  - D) having no personal biases or beliefs.
14. Ideally, scientists try to disprove their own hypotheses and those of others. In other words, they practice:
- A) verification.
  - B) skepticism.
  - C) validation.
  - D) empiricism.

15. What is the most direct way to test a hypothesis about a cause-effect relationship?
- A) a correlational study
  - B) a descriptive study
  - C) an experiment
  - D) a self-report
16. In an experiment, the independent variable is the one that the researcher:
- A) systematically varies.
  - B) hypothesizes to be affected by another variable.
  - C) must measure.
  - D) discovers.
17. In an experiment, the variable hypothesized to be the cause is called the \_\_\_\_\_, and the variable hypothesized to be affected is called the \_\_\_\_\_.
- A) independent variable; dependent variable
  - B) dependent variable; independent variable
  - C) experimental variable; independent variable
  - D) constant; variable
18. In a(n) \_\_\_\_\_, the researcher systematically varies the \_\_\_\_\_.
- A) experiment; independent variable
  - B) experiment; dependent variable
  - C) correlational study; independent variable
  - D) correlational study; dependent variable
19. The various groups that participate in an experiment will *necessarily* differ from each other with respect to the:
- A) dependent variable.
  - B) independent variable.
  - C) dependent and independent variable.
  - D) None of the answers is correct.
20. In an experiment, the dependent variable is the one that the researcher:
- A) hypothesizes will affect some other variable.
  - B) measures to determine whether it is affected by the independent variable.
  - C) holds constant.
  - D) systematically varies.

21. How can an experiment allow a researcher to demonstrate a cause-effect relationship between two variables?
- A) Experiments allow researchers to investigate natural relationships between two or more variables without having to actually manipulate the variables.
  - B) If other variables are kept constant and only the independent variable is changed, a researcher can conclude that change in the dependent variable is caused by change in the independent variable.
  - C) Researchers are able to apply different conditions of the dependent variable to each subject or groups of subjects, thus observing what effects this produces.
  - D) Cause-effect relationships involving human behavior can never be shown because of the wide differences among individuals and even among the same individuals in different situations.
22. In Pfungst's experiments with Clever Hans, the dependent variable was:
- A) the varying procedures by which one or more of the horse's sensory systems were blocked.
  - B) the presence or absence of people who believed that the horse could understand and answer questions correctly.
  - C) the percentage of questions that the horse answered correctly in a given test.
  - D) whether or not the horse had been taught the answers to the particular questions being asked.
23. What allowed Pfungst to demonstrate the existence of a cause-effect relationship between visual cues being given by observers and Clever Hans's ability to respond correctly to questions?
- A) Pfungst measured the percentage of questions Hans answered correctly with or without blinders on, and kept other variables constant across the two test conditions.
  - B) Pfungst carefully observed von Osten and others present during Hans's performance to see how their behavior differed regarding the questions Hans got right versus those he got wrong.
  - C) Pfungst discovered a correlation between the number of observers present and the number of questions Hans could correctly answer.
  - D) Pfungst observed the direction in which Hans was looking after each question was posed and then tested the person standing there to see if he knew the answer and could thus be feeding Hans the answers.

24. In the study by DiMascio of the effects of different methods of treatment (drug therapy, psychotherapy, both types of therapy, or no therapy) on patients suffering from major depression, the independent variable was the \_\_\_\_\_ and the dependent variable was the \_\_\_\_\_.
- A) measured level of depression; type of treatment
  - B) type of treatment; measured level of depression
  - C) number of treatment groups; Type of treatment
  - D) type of treatment; number of patients in each group
25. Which of the following is TRUE about correlational studies?
- A) No variables are manipulated.
  - B) Cause and effect are determined.
  - C) Several variables are manipulated.
  - D) They are not a reliable way to make predictions about variables with regard to one another.
26. A study in which the researcher does not manipulate any variable but measures two or more variables to find relationships among them is a(n):
- A) descriptive study.
  - B) experiment.
  - C) correlational study.
  - D) double-blind study.
27. Researcher Diana Baumrind classified families according to the parents' discipline style and measured behavioral characteristics of their children. She then looked for a relationship between the children's behavior and their parents' style of discipline. This type of research design is a(n):
- A) experiment.
  - B) descriptive study.
  - C) correlational study.
  - D) self-report study.

28. In her correlational study of parents' disciplinary styles and children's development, Diana Baumrind found that children of authoritative parents scored higher on behavioral measures than did children of authoritarian and permissive parents. Although parenting styles could be the cause of children's behaviors, which of the following interpretations for her findings is also a possibility?
- A) The causal relationship may go in both directions, with parents and children influencing each other's behavior.
  - B) Differences in children's behavior may cause differences in parents' discipline style.
  - C) A third variable not measured in Baumrind's study, such as socioeconomic status, may influence both parents' discipline style and children's behavior.
  - D) All of the answers are possible interpretations.
29. A laboratory study is best characterized as a study in which:
- A) observational rather than self-report data are collected.
  - B) descriptive as well as inferential statistics are used.
  - C) data are collected from subjects who are brought to an area specifically designed to provide uniform, controlled conditions.
  - D) one or more independent variables are manipulated by the researcher and one or more dependent variables are measured.
30. Which type of research study brings the subjects to a specially designed area that has been set up to facilitate the researcher's collection of data or control over environmental conditions?
- A) field study
  - B) laboratory study
  - C) observational study
  - D) artificial study
31. Which statement best represents the concept of naturalistic observation?
- A) manipulating a variable in the environment and observing the subject's behaviors
  - B) observing behaviors that come naturally to the subject
  - C) observing a subject's behavior without interfering in any way
  - D) observing relationships between two variables within a subject's natural environment

32. Psychological tests cover a wide range, including reaction-time tests, intelligence tests, personality profiles, and animal mazes. The one characteristic typical of all psychological tests is that they:
- A) involve naturalistic observation.
  - B) measure naturally occurring behavior.
  - C) measure artificial behavior.
  - D) present a stimulus to subjects whose response is then recorded.
33. A major advantage of naturalistic observation as a data-collection method is that it:
- A) can allow researchers to learn firsthand about their subjects' behaviors without interfering with the situation.
  - B) is simpler and less time-consuming to carry out.
  - C) allows cause-and-effect conclusions to be drawn with more certainty.
  - D) yields results that are easy to code in a form that can be used for statistical analysis.
34. Dr. Zhang has conducted a between-groups experiment to test the effects of caffeine on memory. What will inferential statistics tell him about his data that descriptive statistics cannot?
- A) the average score on the memory test for each group
  - B) the likelihood that performance differences between the groups occurred by chance, not because of the caffeine
  - C) how far, on average, each individual's score is from the mean of that person's group
  - D) the middle score in his data set
35. The median of 6, 2, 1, 9, 3 is:
- A) 9.
  - B) 3.
  - C) 1.
  - D) 5.
36. If Karen wanted to use one number to represent the typical scene in her set of data, she should use one of the types of statistics known as:
- A) measures of central tendency.
  - B) correlation coefficients.
  - C) measures of variability.
  - D) inferential statistics.



37. Which statement below best represents the role of statistics in the scientific field of psychology?
- A) Statistics does not have a role in psychology.
  - B) They are used to determine what results a study will get, before the study is run.
  - C) They summarize and analyze the data that have been collected in a research study so the researcher can describe them as a whole as well as ensuring these results are not due to chance.
  - D) Statistics is used in psychophysics to determine just-noticeable-difference.
38. Rachel and her five friends shared a super-size pizza. They each ate the following number of pieces: 3, 3, 2, 2, 5, and 3. The mean number of pieces these six friends ate is:
- A) 2.
  - B) 3.
  - C) 5.
  - D) 6.
39. What type of statistics help to summarize sets of data?
- A) descriptive statistics
  - B) inferential statistics
  - C) manipulative statistics
  - D) biased statistics
40. If an experiment has the correlation coefficient of  $-0.85$ , this means that when one variable decreases the other variable:
- A) decreases.
  - B) increases.
  - C) stays the same.
  - D) There is no correlation if the number is less than 0.
41. When scores are ranked from highest to lowest, the middle score is the:
- A) mean.
  - B) standard deviation.
  - C) median.
  - D) correlation coefficient.
42. The mean and the median are both:
- A) measures of the central tendency of a set of numbers.
  - B) measures of the variability of a set of numbers.
  - C) measures of the correlation between two variables.
  - D) examples of inferential statistics.

43. Which of the following is the mean of the numbers 5, 7, 8, 9, 16?  
A) 4  
B) 8  
C) 9  
D) 45
44. Which of the following is the median of the numbers 8, 7, 5, 9, 12?  
A) 5  
B) 8  
C) 8.2  
D) 9
45. Which of the following is TRUE of descriptive statistics?  
A) They include all the numerical methods for summarizing a set of data.  
B) They are used to help decide how confident one can be in drawing specific conclusions from the data.  
C) They are used in correlational studies but not in experiments.  
D) They constitute graphic analysis of experimental data.
46. The arithmetic average of a set of scores is the:  
A) mean.  
B) standard deviation.  
C) median.  
D) correlation coefficient.
47. Central tendency is to variability as \_\_\_\_\_ is to \_\_\_\_\_.  
A) mean; median  
B) median; standard deviation  
C) standard deviation; correlation coefficient  
D) experiment; naturalistic observation
48. The standard deviation is a measure of:  
A) central tendency.  
B) correlation.  
C) variability.  
D) bias.

49. Which of the following takes into account the difference between each individual score and the mean and combines those differences to produce a single measure of variability?
- A) median
  - B) correlation coefficient
  - C) standard deviation
  - D) inferential statistic
50. The greater the average difference between each score and the mean, the greater the:
- A) statistical significance.
  - B) correlation.
  - C) reliability.
  - D) standard deviation.
51. Which of the following correlation coefficients would indicate the strongest correlation theoretically possible?
- A)  $-0.30$
  - B)  $0.00$
  - C)  $-1.00$
  - D)  $3.00$
52. Which of the following correlation coefficients would indicate the weakest correlation?
- A)  $0.00$
  - B)  $0.20$
  - C)  $0.50$
  - D)  $-0.40$
53. A correlation coefficient of  $-0.90$  would indicate:
- A) no correlation.
  - B) a weak correlation.
  - C) a moderate correlation.
  - D) a strong correlation.
54. A correlation coefficient expresses the \_\_\_\_\_ of the correlation between two variables.
- A) strength
  - B) significance
  - C) direction
  - D) both strength and direction

55. A \_\_\_\_\_, which is commonly used to visualize results of a(n) \_\_\_\_\_ study, allows researchers to show each subject's scores on two variables as a single point on the graph.
- A) scatter plot; correlational
  - B) scatter plot; experimental
  - C) standard deviation; correlational
  - D) standard deviation; experimental
56. Which of the following are explicitly designed to help a researcher decide how much confidence to place in a specific conclusion based on data?
- A) descriptive statistics
  - B) inferential statistics
  - C) measures of central tendency
  - D) correlation coefficients
57. At what  $p$  value are results typically considered statistically significant?
- A) 0.05
  - B) 0.5
  - C) 5.0
  - D) 50
58. Something is statistically significant if it has a value of  $p$  less than:
- A) .05 percent.
  - B) 5.
  - C) 5 percent.
  - D) .5 percent.
59. Results are labeled as significant if:
- A)  $P < .05$ .
  - B)  $P > .05$ .
  - C)  $P > .5$ .
  - D)  $P < .5$ .
60. When psychologists say that the probability that results could be caused by chance is small, they mean that there is a good chance the study is:
- A) statistically significant.
  - B) biased.
  - C) valid.
  - D) correct.

61. What elements go into a test of statistical significance?
- A) size of observed effect; number of subjects or observations; variability of data within each group
  - B) size of error; size of bias effects; variability of data within each group
  - C) reliability of measures; number of subjects or observations; variability of data within each group
  - D) reliability of measures; size of bias effects; size of observed effect
62. Nonrandom effects caused by some factor outside of the research hypothesis can be a serious problem for researchers. Such effects are referred to as:
- A) error.
  - B) statistical significance.
  - C) validity.
  - D) bias.
63. As a technical term, *error* refers to:
- A) nonrandom (directed) effects caused by some factor extraneous to the research hypothesis.
  - B) increased randomness in results.
  - C) the use of improper statistical procedures in data analysis.
  - D) observer-expectancy and subject-expectancy effects influencing the results.
64. Using subjects who are initially different from subjects in the larger group that a researcher is interested in is known as using a \_\_\_\_\_ sample.
- A) reliable
  - B) diverse
  - C) popular
  - D) biased
65. As a technical term, *bias* refers to:
- A) nonrandom (directed) effects caused by some factor extraneous to the research hypothesis.
  - B) increased randomness in results.
  - C) the use of improper statistical procedures in data analysis.
  - D) deliberate attempts to falsify data.

66. A psychologist studying a sample that is not really representative of the intended population she wishes to describe has a:
- A) nonsignificant sample.
  - B) biased sample.
  - C) partial sample.
  - D) blind sample.
67. If a test measuring intelligence is given to an individual multiple times and yields largely different scores every time, what might be lacking?
- A) reliability
  - B) face validity
  - C) an independent variable
  - D) statistical significance
68. Low reliability of a measurement procedure is a source of:
- A) bias.
  - B) error.
  - C) validity.
  - D) improbability.
69. A measure is reliable if it:
- A) yields similar results each time it is used to measure a particular subject under a particular set of conditions.
  - B) measures or predicts what it is intended to measure or predict.
  - C) appears, on the basis of common sense, to be a good measure of what it is intended to measure.
  - D) correlates with a more direct index of the trait that it is intended to measure.
70. A procedure that actually measures (or predicts) what it is supposed to measure (or predicts) is described as:
- A) unbiased.
  - B) valid.
  - C) reliable.
  - D) biased.

71. A test of mathematical ability is said to be \_\_\_\_\_ if it truly measures mathematical ability and \_\_\_\_\_ if it gives approximately the same results each time a person takes it.
- A) statistically significant; descriptive
  - B) descriptive; statistically significant
  - C) reliable; valid
  - D) valid; reliable
72. Lack of validity in a measurement procedure is a source of concern mostly because it can lead to:
- A) error.
  - B) placebo effects.
  - C) variability.
  - D) bias.
73. A test that, on the basis of common sense, seems to measure what it claims to measure has high:
- A) face validity.
  - B) criterion validity.
  - C) reliability.
  - D) observer expectancy.
74. A measure has criterion validity if it:
- A) yields similar results each time it is used to measure a particular subject under a particular set of conditions.
  - B) measures or predicts what it is intended to measure or predict.
  - C) appears, on the basis of common sense, to be a good measure of what it is intended to measure.
  - D) correlates with a more direct index of the trait that it is intended to measure.
75. If the answers that a research subject gives to interview questions are affected by the preconceived notions of the interviewer, the answers are biased by:
- A) the observer-expectancy effect.
  - B) the placebo effect.
  - C) the double-blind effect.
  - D) criterion validity.

76. Facilitated communication, by which autistic children were supposedly able to answer questions, express emotions, and describe events in their lives, provides a classic illustration of:
- A) observer-expectancy effects.
  - B) subject-expectancy effects.
  - C) observer-blindness effects.
  - D) subject-blindness effects.
77. Skeptics who reasoned that facilitated communication could be the result of observer-expectancy effects tested their hypothesis by asking autistic children and their facilitators questions under conditions in which the facilitator either did or did not know the answer. The results consistently showed that the answers given were:
- A) usually correct when the autistic child knew the answer and was always wrong when the facilitator did not know the answer.
  - B) usually correct when the facilitator knew the answer and was always wrong when the facilitator did not know the answer.
  - C) only correct when both the autistic child and the facilitator knew the answer and was no better than chance when both the autistic child and the facilitator did not know the answer.
  - D) usually correct when the facilitator knew the answer and was no better than chance when the facilitator did not know the answer.
78. One way to keep observer-expectancy and subject-expectancy effects from occurring in an experiment is to:
- A) let only the participants know which groups they are being assigned to.
  - B) let only the experimenters know which groups the participants are being assigned to.
  - C) let both participants and experimenters know which groups the participants are being assigned to.
  - D) let neither participants nor experimenters know which groups the participants are being assigned to.
79. Tim is placed in the placebo group and Jon is placed in the control group. They are most likely a part of a:
- A) biased sample.
  - B) medical trail.
  - C) double blind experiment.
  - D) correlational study.



80. If the people receiving a particular experimental treatment behave in a particular way because of their own beliefs about that treatment, we say:
- A) there is a subject-expectancy effect.
  - B) there is an observer-expectancy effect.
  - C) this is the result of a blind study.
  - D) this is the result of poor reliability.
81. What is a double-blind experiment?
- A) when neither the experimenter or participants know to which group they are assigned in a study
  - B) when both the experimenter and participants know to which groups they are assigned
  - C) when the experimenter is a blind person
  - D) when the participant is a blind person
82. What is the purpose of using a placebo in a drug experiment?
- A) to guard against possibly dangerous effects of the drug being tested
  - B) to avoid giving the drug to someone who does not need it
  - C) to determine whether the drug has any effect beyond that produced by the subjects' own expectations
  - D) to reduce the random variability that naturally occurs in any behavioral test
83. A double-blind study protects against:
- A) subject-expectancy effects.
  - B) observer-expectancy effects.
  - C) both answers are correct.
  - D) neither answer is correct.
84. Ethical issues in human psychological research involve all of the following *except* the:
- A) person's right to privacy.
  - B) discomfort or psychological harm that a research procedure might produce.
  - C) use of deception that characterizes some research designs.
  - D) use of invalid instruments in data-gathering procedures.

## Answer Key - Methods Review

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

- 53. D
- 54. D
- 55. A
- 56. B
- 57. A
- 58. C
- 59. A
- 60. A
- 61. A
- 62. D
- 63. B
- 64. D
- 65. A
- 66. B
- 67. A
- 68. B
- 69. A
- 70. B
- 71. D
- 72. D
- 73. A
- 74. D
- 75. A
- 76. A
- 77. D
- 78. D
- 79. C
- 80. A
- 81. A
- 82. C
- 83. C
- 84. D