

1. Hindsight bias leads people to perceive psychological research outcomes as
 - A) unpredictable.
 - B) inexplicable.
 - C) unlikely.
 - D) unsurprising.

2. Jamie and Lynn were sure that they had answered most of the multiple-choice questions correctly because “the questions required only common sense.” However, they each scored less than 60% on the exam. This best illustrates
 - A) a confounding variable.
 - B) random assignment.
 - C) hindsight bias.
 - D) overconfidence.

3. Brandon reads his psychology text regularly and attends class most days, so he felt prepared when he took the midterm exam. He just knew he aced the test. When his Professor returned his exam, he found that he earned a C. What happened?
 - A) Brandon experienced hindsight bias.
 - B) Brandon was overconfident.
 - C) Brandon engaged in scientific inquiry.
 - D) Brandon perceived a pattern in random events.

4. If someone were to flip a coin six times, which of the following sequences of heads (H) and tails (T) would be most likely?
 - A) H H H T T T
 - B) H T T H T H
 - C) T T H H T H
 - D) All of these sequences would be equally likely.

5. Which of the following can help us sift reality from illusion?
 - A) intuition
 - B) scientific inquiry
 - C) overconfidence
 - D) hindsight bias

6. Which of the following is NOT a characteristic of a useful theory?
- A) It organizes observations.
 - B) It cannot be refuted.
 - C) It implies predictions that anyone can use to check the theory or to derive practical applications.
 - D) It stimulates further research that may lead to a revised theory that better organizes and predicts.
7. Sigmund Freud, Abraham Maslow, Erik Erikson, and Carl Rogers all developed ways to explain behaviors or events by offering ideas that organize observations. Their ideas are called
- A) theories.
 - B) patterns in random events.
 - C) the scientific method.
 - D) scientific inquiry.
8. Psychological theories help to
- A) organize scientific observations.
 - B) explain observed facts.
 - C) generate hypotheses.
 - D) do all of these things.
9. Which research method runs the greatest risk of collecting evidence that may be unrepresentative of what is generally true?
- A) naturalistic observation
 - B) the case study
 - C) experimentation
 - D) the survey
10. Every twenty-fifth person who subscribed to a weekly news magazine was contacted by market researchers to complete a survey of opinions regarding the magazine's contents. The researchers were applying the technique known as
- A) naturalistic observation.
 - B) the double-blind procedure.
 - C) random sampling.
 - D) replication.

11. In studying the relationship between body weight and popularity, Professor Vescio is attempting to determine the correlation between two
- A) replications.
 - B) variables.
 - C) random samples.
 - D) placebos.
12. A correlation of +0.70 between children's physical height and their popularity among their peers indicates that
- A) higher levels of popularity among peers are associated with greater physical height in children.
 - B) there is no relationship between children's height and their popularity.
 - C) being unusually short or tall has a negative impact on children's popularity.
 - D) children's height has no causal impact on their popularity.
13. To test the potential effect of hunger on taste sensitivity, groups of research participants are deprived of food for differing lengths of time before they engage in a taste-sensitivity test. This research is an example of
- A) correlational research.
 - B) an experiment.
 - C) survey research.
 - D) naturalistic observation.
14. In a study of factors that might affect memory, research participants were assigned to drink either an alcoholic or a nonalcoholic beverage prior to completing a memory test. Those who drank the nonalcoholic beverage were assigned to the _____ group.
- A) survey
 - B) control
 - C) experimental
 - D) correlational
15. Researchers control factors that might influence a dependent variable by means of
- A) random assignment.
 - B) replication.
 - C) naturalistic observation.
 - D) operational definitions.

16. In an experimental study of the effects of dieting on weight loss, dieting would be the
- A) control condition.
 - B) independent variable.
 - C) dependent variable.
 - D) placebo.
17. In a well-controlled experiment, researchers seek to minimize
- A) confounding variables.
 - B) informed consent.
 - C) replication.
 - D) random assignment.
18. Which of the following processes typically takes place shortly after people complete their participation in a research study?
- A) random assignment
 - B) informed consent
 - C) the double-blind procedure
 - D) debriefing

Answer Key

1. D
2. D
3. B
4. D
5. B
6. B
7. A
8. D
9. B
10. C
11. B
12. A
13. B
14. B
15. A
16. B
17. A
18. D

1. When your best friend hears that you are taking a psychology course, she asserts that psychology is simply common sense. Explain why your awareness of both the limits of everyday reasoning and the methods of psychological research would lead you to disagree with your friend's assertion.
2. Explain how research in psychological science is used to create, test, and verify or disprove various theories.
3. The table below lists the scores of eight students on a test to measure anxiety, as well as the typical number of cigarettes each person smokes daily. Scores on the anxiety test can range anywhere from a low of 0 (indicating very low anxiety) to a high of 30 (indicating very high anxiety).

Student	Anxiety Test Score	Cigarettes Smoked Daily
1	8	11
2	9	3
3	15	11
4	14	16
5	21	26
6	12	10
7	22	24
8	17	18

Construct a scatterplot to represent the correlation between smoking and anxiety. Describe the direction of the correlation and give two possible explanations for it.

4. Design an experiment to test whether playing violent video games influences childhood aggression. Be sure to specify your experimental hypothesis and identify your dependent and independent variables, as well as your experimental and control conditions. Identify any experimental procedures that would help to ensure the reliability of your research.
5. Dr. Schmidt would like to investigate the effectiveness of a newly invented drug to treat clinical depression. Specifically, he would like to determine if it is more effective than current medications for this disorder. With this in mind, design an experiment using the double-blind procedure and explain how the placebo effect could impact the results of this study. Be sure to identify your dependent and independent variables, as well as any confounding variables. Also, specify your experimental and control conditions. Identify any experimental procedures that would help to ensure the reliability of your research.

6. To investigate the impact of alcohol consumption on sexual arousal, researchers plan to give experimental participants either an alcoholic or a nonalcoholic drink just prior to their watching a sexually arousing movie. Describe the appropriate ethical guidelines that the researchers would need to meet in order to conduct this study.

Answer Key

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

1. Mark is reviewing recent applications for an opening at his company. The first few he reviews do not meet the minimum qualifications for the position, and Mark thinks to himself, "There is not one qualified applicant this time." Mark has demonstrated
 - A) operational definitions.
 - B) hypothesizing.
 - C) hindsight bias.
 - D) sampling bias.

2. The hindsight bias refers to people's tendency to
 - A) dismiss the value of skepticism.
 - B) reject any ideas that can't be scientifically tested.
 - C) exaggerate their ability to have foreseen an outcome.
 - D) overestimate the extent to which others share their opinions.

3. Rebecca is talking to her friend about her daughter, Amy, who is in the ninth grade. Amy seems to have changed dramatically. She has changed her group of friends, she stays out past curfew, and she has been caught drinking alcohol. Also, her grades have dropped significantly. Rebecca's friend remarks, "Of course! Bad associations spoil useful habits." This best demonstrates
 - A) hindsight bias.
 - B) overconfidence.
 - C) scientific inquiry.
 - D) perceiving patterns in random events.

4. The perception that psychological research findings merely verify our commonsense understanding is most clearly facilitated by
 - A) random assignment.
 - B) hindsight bias.
 - C) operational definitions.
 - D) the placebo effect.

5. Steven sees a group of teenagers walking down the street toward him. They are all wearing jeans with holes in them, black t-shirts with band logos on the front, and spiked, colorful hair. He thinks, "Birds of a feather flock together." This demonstrates
 - A) hindsight bias.
 - B) overconfidence.
 - C) scientific inquiry.
 - D) perceiving patterns in random events.

6. Giving half the members of a group some purported psychological finding and the other half an opposite finding is an easy way to demonstrate the impact of
- A) the placebo effect.
 - B) confounding variables.
 - C) hindsight bias.
 - D) the double-blind procedure.
7. Professor Smith told one class that drinking alcohol has been found to increase sexual desire. He informed another class that drinking alcohol has been found to reduce sexual appetite. The fact that neither class was surprised by the information they received best illustrates the power of
- A) cause-effect conclusions.
 - B) hindsight bias.
 - C) replication.
 - D) the placebo effect.
8. Several weeks after a political election, voters often exaggerate their ability to have predicted the election outcome. This best illustrates
- A) the placebo effect.
 - B) random assignment.
 - C) wording effects.
 - D) hindsight bias.
9. Mike Crampton's stockbroker has informed him that he has suffered substantial investment losses. When Mike tells his wife, she angrily responds, "I could have told you that your investment plan would fail!" Her comment best illustrates
- A) hindsight bias.
 - B) debriefing.
 - C) the placebo effect.
 - D) replication.
10. The scientific attitude of humility is most likely to be undermined by
- A) hindsight bias.
 - B) curious skepticism.
 - C) ethical standards.
 - D) critical thinking.

11. Formulating testable predictions before conducting research is most directly useful for restraining a thinking error known as
- A) random sampling.
 - B) hindsight bias.
 - C) the placebo effect.
 - D) random assignment.
12. Our tendency to believe we know more than we do best illustrates
- A) naturalistic observation.
 - B) the placebo effect.
 - C) overconfidence.
 - D) random assignment.
13. Megan was certain that she would never live far away from her family. However, when offered a job in another state, she decided to move. Megan's experience best illustrates
- A) hindsight bias.
 - B) random assignment.
 - C) the placebo effect.
 - D) overconfidence.
14. Which of the following is most likely to inhibit critical thinking?
- A) hindsight bias
 - B) overconfidence
 - C) discerning hidden values
 - D) creativity
15. Statisticians Persi Diaconis and Frederick Mosteller commented, "But with a large enough sample, any outrageous thing is likely to happen." What were they referring to?
- A) hindsight bias
 - B) overconfidence
 - C) scientific inquiry
 - D) perceiving patterns in random events
16. On a series of coin tosses, Oleg has correctly predicted heads or tails seven times in a row. In this instance, we can reasonably conclude that Oleg's predictive accuracy
- A) defies the laws of statistical probability.
 - B) illustrates hindsight bias.
 - C) is inconsistent with the placebo effect.
 - D) is a random and coincidental occurrence.

17. Six of the children in Mr. Myer's class were born on exactly the same day. This strikes him as astonishing and improbable. In this instance, he should be reminded that
- A) random sequences of events often don't look random.
 - B) events often seem more probable in hindsight.
 - C) sampling extreme cases leads to false generalizations.
 - D) correlation does not prove causation.
18. The self-correcting process for asking questions and observing nature's answers is known as
- A) a theory.
 - B) a prediction.
 - C) the scientific method.
 - D) an operational definition.
19. Dr. Tate is an excellent researcher. She is curious, humble, and skeptical. These are all characteristics of
- A) having a scientific attitude.
 - B) using the scientific method.
 - C) forming a theory.
 - D) testing a hypothesis.
20. A theory is an explanation using an integrated set of principles that _____ observations and _____ behaviors or events.
- A) questions; surveys
 - B) replicates; controls
 - C) organizes; predicts
 - D) randomly samples; randomly assigns
21. Professor Shalet contends that parents and children have similar levels of intelligence largely because they share common genes. His idea is best described as a(n)
- A) theory.
 - B) replication.
 - C) naturalistic observation.
 - D) operational definition.

22. The explanatory power of a scientific theory is most closely linked to its capacity to generate testable
- A) assumptions.
 - B) correlations.
 - C) predictions.
 - D) variables.
23. A hypothesis is a(n)
- A) observable relationship between specific independent and dependent variables.
 - B) testable prediction that gives direction to research.
 - C) set of principles that organizes observations and explains newly discovered facts.
 - D) unprovable assumption about the unobservable processes that underlie psychological functioning.
24. Testing hypotheses and refining theories is central to
- A) debriefing.
 - B) regression toward the mean.
 - C) the scientific method.
 - D) informed consent.
25. Professor Delano suggests that because people are especially attracted to those who are good-looking, handsome men will be more successful than average-looking men in getting a job. The professor's prediction regarding employment success is an example of
- A) informed consent.
 - B) the placebo effect.
 - C) a hypothesis.
 - D) a confounding variable.
26. Dr. Masterson is studying the relationship between media exposure to sexual content and sexual behavior. Dr. Masterson predicts that those who view more sexual content are more likely to practice risky sexual behaviors. This idea is a(n)
- A) theory.
 - B) hypothesis.
 - C) operational definition.
 - D) hunch.

27. A statement describing the exact procedures for measuring an anticipated experimental outcome is known as a(n)
- A) hypothesis.
 - B) control condition.
 - C) replication.
 - D) operational definition.
28. In a published report of a research study on social anxiety, psychologists included a 30-item questionnaire, which they had used to assess levels of social anxiety. The psychologists have thus provided their readers with a(n)
- A) hypothesis.
 - B) independent variable.
 - C) operational definition.
 - D) double-blind procedure.
29. Replication of a research study is most likely to be facilitated by
- A) regression toward the mean.
 - B) debriefing.
 - C) operational definitions.
 - D) the placebo effect.
30. Dr. Psychology is studying the relationship between alcohol intoxication and risky driving behaviors. Dr. Psychology defines alcohol intoxication as having a blood alcohol level of .08. This definition of alcohol intoxication is a(n)
- A) theory.
 - B) hypothesis.
 - C) operational definition.
 - D) hunch.
31. Dr. Jones is studying the effect of room lighting on college students' test performance and has defined room lighting as either dimly lit or brightly lit. This definition is an example of a(n)
- A) theory.
 - B) hypothesis.
 - C) operational definition.
 - D) hunch.

32. Repeating the essence of a previous research study to verify whether its findings extend to a new group of research participants and to different circumstances is called
- A) replication.
 - B) random sampling.
 - C) naturalistic observation.
 - D) the double-blind procedure.
33. Professor Ambra was skeptical about the accuracy of recently reported research on sleep deprivation. Which process would best enable her to assess the reliability of these findings?
- A) naturalistic observation
 - B) replication
 - C) random sampling
 - D) the case study
34. Dr. Smith just reviewed an article that found a relationship between playing violent video games and childhood aggression. Dr. Smith would like to conduct a similar study to see if he obtains the same results. Dr. Smith is planning on _____ this study.
- A) operationalizing
 - B) replicating
 - C) copying
 - D) plagiarizing
35. When 270 psychologists attempted to replicate 100 psychological studies, they were able to successfully replicate only 36 percent of them. Which of the following is NOT a possible explanation for this?
- A) The 270 psychologists did not accurately repeat the original studies.
 - B) Psychology is a pseudoscience.
 - C) Some research topics make replication quite difficult.
 - D) Using a small sample size makes replication difficult.
36. Which of the following is NOT a descriptive method?
- A) case study
 - B) naturalistic observation
 - C) survey
 - D) experiment

37. The case study is a research method in which
- A) a single individual or group is studied in great depth.
 - B) a representative sample of people are questioned regarding their opinions or behaviors.
 - C) organisms are carefully observed in a laboratory environment.
 - D) an investigator manipulates one or more variables that might affect behavior.
38. To understand the unusual behavior of an adult client, a clinical psychologist carefully investigates the client's current life situation and his physical, social-cultural, and educational history. Which research method has the psychologist used?
- A) the survey
 - B) the case study
 - C) experimentation
 - D) naturalistic observation
39. Little Hans' extreme fear of horses was observed as part of a(n)
- A) experiment.
 - B) survey.
 - C) case study.
 - D) double-blind procedure.
40. The biggest danger of relying on case-study evidence is that it
- A) is based on naturalistic observation.
 - B) may be unrepresentative of what is generally true.
 - C) overestimates the importance of operational definitions.
 - D) leads us to underestimate the causal relationships between events.
41. By revealing what can happen through an in-depth examination of an atypical individual, _____ often suggests directions for future research.
- A) the double-blind procedure
 - B) random assignment
 - C) a case study
 - D) a survey
42. A descriptive technique of monitoring and recording behavior in naturally occurring situations without trying to change or control the situation is called
- A) random sampling.
 - B) naturalistic observation.
 - C) replication.
 - D) the double-blind procedure.

43. New technologies such as smart-phone apps and body-worn sensors have enabled the collection of “big data” by means of
- A) scatterplots.
 - B) case studies.
 - C) experimentation.
 - D) naturalistic observation.
44. One research team studied the ups and downs of human moods by counting positive and negative words in 504 million Twitter messages from 84 countries. The researchers' method best illustrates the use of
- A) experimentation.
 - B) naturalistic observation.
 - C) case studies.
 - D) a survey.
45. Which of the following facilitates descriptions of ongoing behaviors without explaining them?
- A) random assignment
 - B) informed consent
 - C) naturalistic observation
 - D) the double-blind procedure
46. Psychologists who carefully watch the behavior of chimpanzee societies in the jungle are using a research method known as
- A) the survey.
 - B) experimentation.
 - C) naturalistic observation.
 - D) the case study.
47. Professor Ober carefully observes and records the behaviors of children in their classrooms in order to track the development of their social and intellectual skills. Professor Ober is most clearly engaged in
- A) survey research.
 - B) naturalistic observation.
 - C) experimentation.
 - D) replication.

48. In a research study in which participants were fitted with electronically activated recorders so that researchers could sample their daily activities, researchers employed a scientific method known as
- A) naturalistic observation.
 - B) the double-blind procedure.
 - C) experimentation.
 - D) the case study.
49. To compare the pace of life in different countries, investigators measured the speed with which postal clerks completed a simple request. Which research method did this illustrate?
- A) the case study
 - B) naturalistic observation
 - C) the double-blind procedure
 - D) the survey
50. Matthias Mehl and colleagues equipped 79 students with electronic recorders and then eavesdropped on more than 23,000 half-minute life slices of the students' waking hours. They found that students who were the happiest avoided small talk and engaged in more meaningful conversations. Mehl and colleagues used which research method?
- A) case study
 - B) experiment
 - C) experience sampling method
 - D) survey
51. A descriptive technique for obtaining the self-reported attitudes or behaviors of a representative sample of a population is known as
- A) naturalistic observation.
 - B) debriefing.
 - C) a case study.
 - D) a survey.
52. Which research method would be most appropriate for investigating the relationship between the religious beliefs of Americans and their attitudes toward abortion?
- A) the survey
 - B) naturalistic observation
 - C) the case study
 - D) experimentation

53. The finding that twice as many Millennials report having no sexual partners since the age of 18, compared with those born in the 1960s and 1970s, was derived from the use of which research method?
- A) survey
 - B) experiment
 - C) case study
 - D) naturalistic observation
54. Surveys indicate that people are less likely to support “welfare” than “aid to the needy.” These somewhat paradoxical survey results best illustrate the importance of
- A) random sampling.
 - B) wording effects.
 - C) the placebo effect.
 - D) naturalistic observation.
55. In their research on people's perception of the relationship between gun violence and gun control in the United States, Dr. Margo and Dr. Dillman have found that people are more approving of “common sense gun legislation” than “banning weapons.” This finding demonstrates which of the following?
- A) survey
 - B) naturalistic observation
 - C) wording effects
 - D) case study
56. People often fail to make accurate generalizations because they are unduly influenced by _____ cases.
- A) randomly selected
 - B) vivid
 - C) representative
 - D) operationally defined
57. A representative sample is one that accurately reflects a larger
- A) control group.
 - B) scatterplot.
 - C) dependent variable.
 - D) population.

58. To accurately generalize study results, researchers need
- A) a good population base.
 - B) a highly reliable survey.
 - C) naturalistic observation.
 - D) a representative sample.
59. Dr. Renk would like to study the “hook up” culture among college students. To be able to generalize her findings to all college students, she needs a representative sample. To obtain such a sample, Dr. Renk should
- A) offer extra credit to students who complete her questionnaire.
 - B) use naturalistic observation in her study.
 - C) seek a random sample of participants.
 - D) exhibit sampling bias when selecting participants.
60. After noting that a majority of professional basketball players are African-American, Ervin concluded that African-Americans are better athletes than members of other racial groups. Ervin's conclusion best illustrates the danger of
- A) replication.
 - B) random assignment.
 - C) the placebo effect.
 - D) generalizing from vivid cases.
61. When every individual in a large population has a small but equal chance of being included in a survey, researchers are using a procedure known as
- A) the case study.
 - B) the double-blind procedure.
 - C) random sampling.
 - D) naturalistic observation.
62. Which of the following is most useful for helping survey researchers avoid false generalizations?
- A) the case study
 - B) naturalistic observation
 - C) random sampling
 - D) operational definitions

63. Governor Donovan was greeted by large, enthusiastic crowds at all of his political rallies. As a result, he became overconfident about his chances of reelection. In this instance, the governor needs to be alerted to the value of
- A) replication.
 - B) random sampling.
 - C) experimental control.
 - D) naturalistic observation.
64. All those in a group being studied make up the
- A) population.
 - B) sample.
 - C) case study.
 - D) survey.
65. To learn about the TV viewing habits of all the children attending Oakbridge School, Professor DeVries randomly selected and interviewed 50 of the school's students. In this instance, all the children attending the school are considered to be a(n)
- A) population.
 - B) representative sample.
 - C) independent variable.
 - D) control condition.
66. To assess reactions to a proposed tuition hike at her school, Ariana sent a questionnaire to every fifteenth person in the registrar's alphabetical listing of all currently enrolled students. Ariana is ensuring that her survey results are accurate by using
- A) random assignment.
 - B) naturalistic observation.
 - C) replication.
 - D) random sampling.
67. Suppose you want to find out which candidate college students will vote for in an upcoming national election. To be sure the sample of college students you survey is representative of the college student population, you should
- A) survey only a small sample of college students.
 - B) survey only politically informed college students.
 - C) survey every college student on your own campus.
 - D) survey a large representative sample of the college student population.

68. In a survey, psychologists select a random sample of research participants in order to ensure that
- A) the participants are representative of the population they are interested in studying.
 - B) there will be a large number of participants in the research study.
 - C) the study will not be influenced by the researcher's personal values.
 - D) the same number of participants will be assigned to each of the experimental conditions.
69. Correlation is a measure of the extent to which two variables
- A) are related.
 - B) are random samples.
 - C) influence each other.
 - D) are dependent variables.
70. Correlational research is most useful for purposes of
- A) explanation.
 - B) prediction.
 - C) control.
 - D) replication.
71. To discover the extent to which economic status can be used to predict political preferences, researchers are most likely to use
- A) the case study approach.
 - B) naturalistic observation.
 - C) correlational measures.
 - D) experimental research.
72. Which of the following is a statistical measure of both the direction and the strength of a relationship between two variables?
- A) a correlation coefficient
 - B) the descriptive method
 - C) an operational definition
 - D) a theory
73. When we ask, for example, how closely related are the personality scores of identical twins, we are asking how strongly two _____ are related.
- A) experimental groups
 - B) control groups
 - C) variables
 - D) scatterplots

74. A direct relationship in which two sets of scores increase together or decrease together represents
- A) a dependent variable.
 - B) replication.
 - C) a positive correlation.
 - D) a confounding variable.
75. An inverse relationship in which scores for one variable increase as scores for another variable decrease represents
- A) a confounding variable.
 - B) random assignment.
 - C) replication.
 - D) a negative correlation.
76. To determine whether the strength of people's self-esteem is related to their income levels, researchers would most likely make use of
- A) case studies.
 - B) correlational research.
 - C) experimentation.
 - D) naturalistic observation.
77. A graphed cluster of dots, each of which represents the values of two factors, is called a
- A) replication.
 - B) scatterplot.
 - C) control group.
 - D) correlation coefficient.
78. Displaying data in a scatterplot can help us see the extent to which two variables are
- A) random samples.
 - B) operationally defined.
 - C) correlated.
 - D) replications.

79. If the correlation between the physical weight and reading ability of children is $+0.85$, this would indicate that
- A) there is very little statistical relationship between weight and reading ability among children.
 - B) low body weight has a negative effect on the reading abilities of children.
 - C) better reading ability is associated with greater physical weight among children.
 - D) body weight has no causal influence on the reading abilities of children.
80. A correlation between physical attractiveness and dating frequency of $+0.60$ would indicate that
- A) physical attractiveness has no causal influence on dating frequency.
 - B) more frequent dating is associated with lower levels of physical attractiveness.
 - C) it is impossible to predict levels of physical attractiveness based on knowledge of dating frequency.
 - D) less frequent dating is associated with lower levels of physical attractiveness.
81. If the points on a scatterplot are clustered in a pattern that extends from the upper left to the lower right, this would suggest that the two variables depicted are
- A) operationally defined.
 - B) positively correlated.
 - C) negatively correlated.
 - D) not correlated.
82. Which of the following correlations between self-esteem and body weight would enable you to most accurately predict body weight from knowledge of level of self-esteem?
- A) $+0.60$
 - B) $+0.01$
 - C) -0.10
 - D) -0.06
83. Which of the following correlation coefficients expresses the weakest degree of relationship between two variables?
- A) -0.12
 - B) -0.99
 - C) $+0.25$
 - D) -0.50

84. A researcher would be most likely to discover a positive correlation between
- A) intelligence and academic success.
 - B) poverty and physical health.
 - C) self-esteem and depression.
 - D) school grades and school absences.
85. If psychologists discovered that wealthy people are less satisfied with their marriages than poor people are, this would indicate that wealth and marital satisfaction are
- A) causally related.
 - B) negatively correlated.
 - C) independent variables.
 - D) positively correlated.
86. If the correlation between children's intelligence and their creativity is $+1.00$, this would indicate that
- A) there is very little statistical relationship between the two variables.
 - B) lower intelligence has a negative effect on creativity level.
 - C) among children, increased creativity is associated with higher intelligence.
 - D) level of intelligence has no causal influence on the creativity of children.
87. Illusory correlation refers to
- A) the perception of a relationship between two variables that does not exist.
 - B) a correlation that exceeds the value of $+1.00$.
 - C) a random cluster of points on a scatterplot.
 - D) the belief that the correlation of two variables proves causation.
88. Gamblers often throw dice gently for low numbers and hard for high numbers. This most directly illustrates
- A) an illusion of control.
 - B) a scatterplot.
 - C) random assignment.
 - D) regression toward the mean.
89. The illusion that uncontrollable events are correlated with our actions is facilitated by a phenomenon known as
- A) regression toward the mean.
 - B) the correlation coefficient.
 - C) random assignment.
 - D) replication.

90. Regression toward the mean refers to the tendency for
- A) changes in one factor to predict changes in another factor.
 - B) unusual events to be followed by more ordinary events.
 - C) pessimistic thinking to trigger episodes of depression.
 - D) a placebo pill to reduce suffering.
91. Colette received an unusually high grade of A on her first biology test and a B+ on the second, even though she studied equally for both tests. Which of the following best explains Colette's deteriorating pattern of performance?
- A) illusory correlation
 - B) the illusion of control
 - C) the random sampling effect
 - D) regression toward the mean
92. After sports magazines give cover-story attention to the recent outstanding performances of an athlete, the individual often suffers a real decline in performance. This may be at least partially explained in terms of
- A) illusory correlation.
 - B) the illusion of control.
 - C) the placebo effect.
 - D) regression toward the mean.
93. Dr. Cast has found that children who watch more television are more likely to be overweight. Which conclusion can he reach?
- A) Watching television causes obesity.
 - B) Children who are obese like to watch television.
 - C) Watching increased amounts of television is correlated with obesity.
 - D) He cannot make any cause-effect statement.
94. Dr. Aubrey has researched media effects for the past three years and has repeatedly found that college students who report exposure to increased sexual content in the media are also more likely to report engaging in unprotected sex, having intercourse with multiple partners, and consuming alcohol or drugs prior to intercourse. What does this mean?
- A) Exposure to sexual content in the media causes risky sexual behaviors.
 - B) College students who engage in risky sexual behaviors are drawn to sexually explicit media.
 - C) Exposure to sexual content in the media is correlated with risky sexual behaviors.
 - D) Dr. Aubrey cannot make any cause-effect statement.

95. The conclusion that “playing violent video games leads to violent crime” has been refuted by the American Psychological Association. Why was this statement problematic?
- A) It was derived from a survey study.
 - B) Correlation does not prove causation.
 - C) The experiment that reached this conclusion cannot be replicated.
 - D) This finding is not problematic.
96. A recent report stating that “Eighty percent of prisoners in the United States were spanked as children” is problematic because
- A) it was derived from a survey study.
 - B) correlation does not prove causation.
 - C) the experiment that reached this conclusion cannot be replicated.
 - D) This finding is not problematic.
97. What do the parallel research findings of “Eighty percent of prisoners in the United States were spanked as children” and “Seventy-five percent of college students in the United States were spanked as children” demonstrate?
- A) The survey method leads to causal results.
 - B) Correlation does not prove causation.
 - C) Experimental designs cannot be replicated.
 - D) These statements do not demonstrate any problem.
98. Which research method assesses how well one variable predicts another without demonstrating a cause-effect relationship between the variables?
- A) naturalistic observation
 - B) correlational research
 - C) the case study
 - D) the experimental method
99. Suppose that people who watch a lot of violence on TV are also particularly likely to behave aggressively. This relationship would NOT necessarily indicate that watching violence influences aggressive behavior because
- A) we most readily notice associations that confirm our beliefs.
 - B) association does not prove causation.
 - C) sampling extreme cases leads to false generalizations.
 - D) the sample may have been randomly selected.

100. An extensive survey revealed that children with relatively high self-esteem tend to picture God as kind and loving, whereas those with lower self-esteem tend to perceive God as angry. The researchers concluded that the children's self-esteem had apparently influenced their views of God. This conclusion best illustrates the danger of
- A) failing to construct a scatterplot.
 - B) generalizing from extreme examples.
 - C) being influenced by a confounding variable.
 - D) assuming that association proves causation.
101. If psychologists discovered that more intelligent parents have smarter children than less intelligent parents, this would demonstrate that
- A) intelligence is inherited.
 - B) more intelligent parents provide their children with greater educational opportunities than do less intelligent parents.
 - C) the intelligence of parents and children is positively correlated.
 - D) all of these statements are correct.
102. A negative correlation between degree of wealth and likelihood of suffering from a psychological disorder would indicate that
- A) poverty makes people vulnerable to psychological disorders.
 - B) people who are poor are more likely than wealthy people to have a psychological disorder.
 - C) psychological disorders usually prevent people from accumulating wealth.
 - D) all of these statements are correct.
103. Which of the following methods is most helpful for clarifying cause-effect relationships?
- A) the survey
 - B) the experiment
 - C) correlational research
 - D) naturalistic observation
104. Researchers use experiments rather than other research methods in order to isolate
- A) facts from theories.
 - B) causes from effects.
 - C) case studies from surveys.
 - D) random samples from representative samples.

105. The research method in which an investigator manipulates one or more factors to observe the effect on some behavior or mental process is called a(n)
- A) scientific method.
 - B) operational definition.
 - C) case study.
 - D) experiment.
106. Experiments enable researchers to isolate the effects of one or more factors by
- A) manipulating the factors of interest.
 - B) controlling for factors that are not of interest.
 - C) both manipulating the factors of interest and controlling for factors that are not of interest.
 - D) neither manipulating the factors of interest nor controlling for factors that are not of interest.
107. An experiment enables researchers to isolate the effects of one or more factors by manipulating the factors of interest and also by
- A) obtaining participants' informed consent prior to beginning the experiment.
 - B) statistically summarizing participants' responses on a scatterplot.
 - C) holding other factors constant across experimental and control groups.
 - D) fully debriefing participants after completing the experiment.
108. British researchers randomly assigned 424 hospitalized premature infants either to formula feeding or to breast-milk feeding. They found that on intelligence tests taken at the age of 8, those who were breast fed significantly scored higher than those who were formula fed. These researchers conducted a(n):
- A) survey.
 - B) naturalistic observation.
 - C) experiment.
 - D) correlational design.
109. The most reliable way of testing whether a newly introduced method of psychological therapy is truly effective is to use
- A) survey research.
 - B) naturalistic observation.
 - C) correlational research.
 - D) experimental research.

110. In which type of research would an investigator manipulate at least one factor and observe its effect on some behavior or mental process?
- A) the survey
 - B) the case study
 - C) experimentation
 - D) naturalistic observation
111. In a test of the effects of sleep deprivation on problem-solving skills, research participants are allowed to sleep either 4 or 8 hours on each of three consecutive nights. This research is an example of
- A) naturalistic observation.
 - B) survey research.
 - C) a case study.
 - D) an experiment.
112. The group exposed to a newly created drug that is being tested in an experiment is called the _____ group.
- A) control
 - B) standardized
 - C) baseline
 - D) experimental
113. Dr. Branch would like to study the relationship between room lighting and college students' test performance. He randomly assigns students to one of two groups. The first group takes an exam in a dimly lit room; the second group takes the same exam in a regularly lit room. Which is the experimental group?
- A) the group of students who were randomly assigned to one of the two conditions
 - B) the group of students who took the exam in the dimly lit room
 - C) the group of students who took the exam in the regularly lit room
 - D) There is no experimental group because this is a naturalistic observation research design.

114. Professor X is studying the effect of exposure to sexual content on sexual thoughts. She assigns students to one of two conditions. In the first condition, participants are exposed to explicit sexual content and then given a word-completion task, which involves filling in the letter missing from each word. Based on the letter added, the word could be of a sexual nature or not. For instance, b_d could be completed as “bed,” indicating sexual thought, or as “bad,” which has no sexual connotation. In the second condition, participants are not exposed to explicit sexual content but are assigned the same word-completion task. The experimental group consisted of the students who
- A) were not exposed to explicit sexual content.
 - B) were exposed to explicit sexual content.
 - C) completed the word as “bad”.
 - D) completed the word as “bed”.
115. Research participants drank either caffeinated or decaffeinated beverages in a study of the effects of caffeine on anxiety levels. Those who received the caffeinated drinks were assigned to the _____ group.
- A) survey
 - B) experimental
 - C) correlational
 - D) control
116. To assess the effectiveness of flu vaccine for county residents, Mr. McCallum wants to administer vaccine injections to all county residents rather than give half of them a placebo injection. Mr. McCallum is most clearly underestimating the importance of
- A) testing a large sample.
 - B) operationally defining his procedures.
 - C) replicating observations of other researchers.
 - D) creating a control group.
117. Which of the following is true for those assigned to a control group?
- A) The experimenter exerts the greatest influence on participants' behavior.
 - B) The research participants are exposed to all the different experimental treatments.
 - C) The research participants are exposed to the most favorable levels of experimental treatment.
 - D) The experimental treatment is absent.

118. To study the potential effects of social interaction on problem solving, some research participants were instructed to solve problems by working together; other participants were told to solve problems by working alone. Those who worked alone were assigned to the _____ group.
- A) experimental
 - B) survey
 - C) control
 - D) correlational
119. Being randomly assigned to the experimental group in a research project involves being assigned
- A) to that group by chance.
 - B) to the group in which participants are representative of people in general.
 - C) in a way that ensures that the independent variable will affect the dependent variable.
 - D) to the group in which participants all have similar personalities.
120. To accurately isolate cause and effect, experimenters should use
- A) random assignment.
 - B) naturalistic observation.
 - C) case studies.
 - D) correlation coefficients.
121. To assess the impact of test difficulty on persistence of effort, researchers plan to give one group of children relatively easy tests and another group more difficult tests. To reduce the chance that the children in one group are more intelligent than those in the other group, the researchers should make use of
- A) random assignment.
 - B) the double-blind procedure.
 - C) naturalistic observation.
 - D) operational definitions.
122. Research participants are randomly assigned to different groups in an experiment in order to
- A) minimize chances that participants in any group know each other.
 - B) increase chances that participants are representative of people in general.
 - C) minimize any differences between groups of participants.
 - D) increase chances that the different groups have the same number of participants.

123. One research team randomly assigned hospitalized premature infants either to formula feedings or to breast-milk feedings. Which research method did they use?
- A) case study
 - B) experimentation
 - C) naturalistic observation
 - D) correlational research
124. Participants in an experiment are said to be *blind* if they are uninformed about
- A) what experimental hypothesis is being tested.
 - B) whether the experimental findings will be meaningful.
 - C) how the dependent variable is measured.
 - D) which experimental treatment, if any, they are receiving.
125. Both the researchers and the participants in a memory study are ignorant about which participants have actually received a potentially memory-enhancing drug and which have received a placebo. This investigation involves the use of
- A) naturalistic observation.
 - B) random sampling.
 - C) the double-blind procedure.
 - D) replication.
126. To minimize the extent to which outcome differences between experimental and control groups can be attributed to placebo effects, researchers make use of
- A) random sampling.
 - B) the double-blind procedure.
 - C) random assignment.
 - D) operational definitions.
127. An inert substance that may be administered instead of a drug to see if it produces any of the same effects as the drug is called a
- A) placebo.
 - B) scatterplot.
 - C) case study.
 - D) replication.

128. In a study of the effects of drinking alcohol, some participants drank a nonalcoholic beverage that actually smelled and tasted like alcohol. This nonalcoholic drink was a
- A) dependent variable.
 - B) replication.
 - C) placebo.
 - D) double blind.
129. The relief of pain following the taking of an inactive substance that is perceived to have medicinal benefits illustrates
- A) random assignment.
 - B) hindsight bias.
 - C) debriefing.
 - D) the placebo effect.
130. The placebo effect best illustrates the impact of _____ on feelings and behaviors.
- A) the double-blind procedure
 - B) random sampling
 - C) positive expectations
 - D) regression toward the mean
131. In an experimental study, men with erectile disorder received either Viagra or a placebo. In this study, the drug dosage (none versus peak dose) was the
- A) confounding variable.
 - B) dependent variable.
 - C) operational definition.
 - D) independent variable.
132. In a psychological experiment, the experimental factor that is manipulated by the investigator is called the _____ variable.
- A) dependent
 - B) independent
 - C) control
 - D) experimental
133. In an experimental study of the impact of exposure to criticism on self-esteem, exposure to criticism would be the _____ variable.
- A) replicated
 - B) dependent
 - C) confounding
 - D) independent

134. A factor other than the independent variable that might produce an effect in an experiment is called a
- A) wording effect.
 - B) correlation coefficient.
 - C) placebo effect.
 - D) confounding variable.
135. Factors other than those of interest that can potentially influence the results of a study are called
- A) independent variables.
 - B) dependent variables.
 - C) confounding variables.
 - D) randomly assigned variables.
136. To help control for possible confounding variables, researchers use
- A) experimental designs.
 - B) the scientific method.
 - C) random assignment.
 - D) participation effects.
137. If participants in the experimental group of a drug treatment study are much younger than participants in the control group, the age of the research participants is a
- A) dependent variable.
 - B) correlation coefficient.
 - C) confounding variable.
 - D) replication.
138. In a psychological experiment, the factor that may be influenced by the manipulated experimental treatment is called the _____ variable.
- A) dependent
 - B) experimental
 - C) control
 - D) independent

139. Professor X is studying the effect of exposure to sexual content on sexual thoughts. She assigns students to one of two conditions. In the first condition, participants are exposed to explicit sexual content and then given a word-completion task, which involves filling in the letter missing from each word. Based on the letter added, the word could be of a sexual nature or not. For instance, b_d could be completed as “bed,” indicating sexual thought, or as “bad,” which has no sexual connotation. In the second condition, participants are not exposed to explicit sexual content but are assigned the same word-completion task. The dependent variable is
- A) sexual thought.
 - B) the word-completion task.
 - C) exposure to explicit sexual content.
 - D) random assignment.
140. To assess the influence of self-esteem on interpersonal attraction, researchers either insulted or complimented students about their physical appearance just before they went on a blind date. In this research, the dependent variable was
- A) insults or compliments.
 - B) physical appearance.
 - C) interpersonal attraction.
 - D) feelings of self-esteem.
141. An experiment was designed to study the potential impact of alcohol consumption on emotional stability. A specification of the procedures used to measure emotional stability illustrates
- A) the independent variable.
 - B) an operational definition.
 - C) the double-blind procedure.
 - D) random assignment.
142. Assessing how well one variable predicts another variable is to _____ as detecting cause-effect relationships between different variables is to _____.
- A) naturalistic observation; case studies
 - B) descriptive methods; correlational methods
 - C) a control group; an experimental group
 - D) correlational research; experimental research
143. Which of the following is NOT a weakness of the experimental method?
- A) lack of feasibility
 - B) lack of control of variables
 - C) reduced generalizability
 - D) ethical limitations on manipulation of variables

144. The simplified reality of laboratory experiments is most helpful in enabling psychologists to
- A) predict human behavior in almost all situations.
 - B) perceive order in completely random events.
 - C) develop general principles that help explain behavior.
 - D) observe random samples of human conduct.
145. Psychologists study animals because
- A) animal behavior is just as complex as human behavior.
 - B) experiments on people are generally considered to be unethical.
 - C) the ethical treatment of animals is not mandated by professional guidelines.
 - D) similar processes often underlie animal and human behavior.
146. The first major issue that emerges in debates over experimenting on animals centers on the
- A) usefulness of studying biological processes in animals.
 - B) ethics of placing the well-being of humans above that of animals.
 - C) obligation to treat information about individual animals with confidentiality.
 - D) need to obtain the informed consent of animals used in research.
147. A major issue that has emerged from debates over the use of animals in psychological research centers on
- A) whether operational definitions help to distinguish between animal and human functioning.
 - B) when use of the double-blind procedure is most appropriate in animal studies.
 - C) whether experimental methods can reduce the need for descriptive methods in research involving animals.
 - D) what safeguards should protect the well-being of animals used in research.
148. Which of the following is NOT included in the ethics code of the APA for utilizing human participants in research?
- A) Researchers must obtain potential participants' informed consent to participate.
 - B) Researchers must keep personal information of participants confidential.
 - C) Researchers must fully debrief participants following participation in a research study.
 - D) Researchers must report the results of individual participants.

149. Professor X is studying the effect of exposure to sexual content on sexual thoughts. She assigns students to one of two conditions. In the first condition, participants are exposed to explicit sexual content and then given a word-completion task, which involves filling in the letter missing from each word. Based on the letter added, the word could be of a sexual nature or not. For instance, b_d could be completed as “bed,” indicating sexual thought, or as “bad,” which has no sexual connotation. In the second condition, participants are not exposed to explicit sexual content but are assigned the same word-completion task. To ensure ethical treatment of participants, Professor X will NOT need to
- A) obtain participants' informed consent prior to participation.
 - B) keep personal information about participants confidential.
 - C) protect his participants from harm and discomfort.
 - D) report the results of individual participants.
150. In an effort to prevent participants in an experiment from trying to confirm the researchers' predictions, psychologists sometimes
- A) obtain written promises from participants to respond honestly.
 - B) treat information about individual participants confidentially.
 - C) deceive participants about the true purpose of an experiment.
 - D) allow people to decide for themselves whether they want to participate in an experiment.
151. Potential research participants are told enough about an upcoming study to enable them to choose whether they wish to participate. This illustrates the practice of seeking
- A) a representative sample.
 - B) informed consent.
 - C) an operational definition.
 - D) a placebo effect.
152. The ethics codes of the American Psychological Association and the British Psychological Society urge researchers to
- A) avoid the use of monetary incentives in recruiting people to participate in research.
 - B) forewarn potential research participants of the exact hypotheses that the research will test.
 - C) avoid the manipulation of independent variables in research involving human participants.
 - D) explain the research to the participants after the study has been completed.

153. After an experiment, research participants are told its purpose and about any deception they may have experienced. This is called
- A) debriefing.
 - B) replication.
 - C) informed consent.
 - D) the double-blind procedure.
154. Psychologists' personal values
- A) are carefully tested by means of observation and experimentation.
 - B) lead them to avoid experiments involving human participants.
 - C) can bias their observations and interpretations.
 - D) have very little influence on the process of scientific observation.
155. The study of psychology is potentially dangerous because
- A) psychological knowledge can be used for destructive purposes.
 - B) psychologists generally believe that people are not personally responsible for their actions.
 - C) psychological research usually necessitates performing stressful experiments on people.
 - D) psychological research typically violates personal privacy rights.

Answer Key

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

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

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

- 137. C
- 138. A
- 139. A
- 140. C
- 141. B
- 142. D
- 143. B
- 144. C
- 145. D
- 146. B
- 147. D
- 148. D
- 149. D
- 150. C
- 151. B
- 152. D
- 153. A
- 154. C
- 155. A

1. After the horror of 9/11, many people said the American government should obviously have foreseen the likelihood of this form of terrorism. This perception most clearly illustrates
 - A) overconfidence.
 - B) hindsight bias.
 - C) random sampling.
 - D) naturalistic observation.

2. Political officials who have no doubt that their own economic and military predictions will come true most clearly demonstrate
 - A) hindsight bias.
 - B) random assignment.
 - C) overconfidence.
 - D) the placebo effect.

3. Psychologist Philip Tetlock collected more than 27,000 expert predictions of world events. He repeatedly found that experts were _____ percent confident in their prediction but were correct less than _____ percent of the time.
 - A) 40; 80
 - B) 50; 70
 - C) 60; 20
 - D) 80; 40

4. The tendency to perceive meaningful patterns in random sequences of outcomes often leads us to underestimate the extent to which outcomes result from
 - A) a placebo effect.
 - B) psychic powers.
 - C) hidden values.
 - D) chance.

5. Which of the following is NOT a roadblock to critical thinking?
 - A) hindsight bias
 - B) overconfidence
 - C) scientific inquiry
 - D) perceiving patterns in random events

6. A self-correcting process for evaluating ideas with observation and analysis is known as
- A) a scientific attitude.
 - B) the scientific method.
 - C) hindsight bias.
 - D) perceiving patterns in random events.
7. Stacey suggests that because children are more impulsive than adults, they will have more difficulty controlling their anger. Stacey's prediction regarding anger management is an example of
- A) a hypothesis.
 - B) informed consent.
 - C) an operational definition.
 - D) the placebo effect.
8. Professor Carter observes and records the behavior of grocery shoppers as they select items to purchase. Which type of research is Professor Carter using?
- A) survey research
 - B) case study
 - C) experimentation
 - D) naturalistic observation
9. A negative correlation between people's work-related stress and their marital happiness would indicate that
- A) work-related stress has a negative impact on marital happiness.
 - B) marital unhappiness promotes work-related stress.
 - C) higher levels of marital happiness are associated with lower levels of work-related stress.
 - D) marital happiness has no causal influence on work-related stress.
10. When people's negative moods are at their worst, whatever they do to try to alleviate the condition is likely to be followed by an improvement in their mood rather than further worsening. This is best explained in terms of
- A) random assignment.
 - B) illusory correlation.
 - C) informed consent.
 - D) regression toward the mean.

11. Which method offers the most reliable way of assessing whether athletic performance is boosted by drinking soda with caffeine in it?
- A) the survey
 - B) the case study
 - C) the experiment
 - D) naturalistic observation
12. In drug-treatment studies, double-blind procedures minimize outcome differences between experimental and control conditions that could be attributed to
- A) replication.
 - B) operational definitions.
 - C) random sampling.
 - D) placebo effects.
13. To assess whether sense of humor is affected by sexual stimulation, researchers exposed married couples to either sexually stimulating or to sexually nonstimulating movie scenes prior to watching a comedy skit. In this research, the independent variable consisted of
- A) reactions to the comedy skit.
 - B) level of sexual stimulation.
 - C) marital status.
 - D) sense of humor.
14. In an experimental study of the extent to which mental alertness is inhibited by sleep deprivation, mental alertness would be the
- A) control condition.
 - B) independent variable.
 - C) experimental condition.
 - D) dependent variable.
15. Which research design can uncover naturally occurring relationships?
- A) survey
 - B) naturalistic observation
 - C) experiment
 - D) correlational design

16. Ethical principles developed by psychologists urge investigators to
- A) avoid the use of animals in experimental research.
 - B) minimize the use of the double-blind procedure with human research participants.
 - C) treat information about individual research participants confidentially.
 - D) avoid the use of financial incentives in any kind of research.

Answer Key

1. B
2. C
3. A
4. D
5. C
6. B
7. A
8. D
9. C
10. D
11. C
12. D
13. B
14. D
15. D
16. C