

1) Scientists study a _____ and then generalize the results of their investigation to a _____.

- a. sample; population
- b. population; sample
- c. convenience sample; random sample
- d. random sample; convenience sample

Answer: a

Page Reference: 33

Objective: Module 2.1

2) Which of the following is an example of demand characteristics affecting an experiment?

- a. An experimenter draws the wrong conclusions from a study because she did not use the correct statistical analysis.
- b. A participant changes his response to a question because he has the feeling he knows what the experimenter wants.
- c. An experimenter changes her behaviour because she can predict how the participant will respond.
- d. A participant in a double-blind experiment believes she is in the control group.

Answer: b

Page Reference: 35

Objective: Module 2.1

3) Why it is a bad idea to draw conclusions from anecdotal evidence?

- a. Such conclusions usually go against common sense and conclusions against common sense are not usually valid.
- b. Anecdotes are reliable only if they come from experts, which they rarely do.
- c. Anecdotes are a single-blind technique, not a double-blind method.
- d. There is no way to know if the anecdote is true or if it will generalize to other people and situations.

Answer: d

Page Reference: 39

Objective: Module 2.1

4) What does a correlation coefficient of -0.94 indicate about the relationship between two variables?

- a. The variables are weakly associated, with both increasing together.
- b. The variables are strongly associated, with both increasing together.
- c. The variables are weakly associated, with one increasing as the other decreases.
- d. The variables are strongly associated, with one increasing as the other decreases.

Answer: d

Page Reference: 47

Objective: Module 2.2

5) Most people would agree that anxiety can lead to sleep loss. However, Dr. Jenkins believes that sleep deprivation can also cause increased anxiety. Which research method would allow him to test a cause–effect relationship between the two?

- a. naturalistic observation
- b. experimental
- c. correlational
- d. survey

Answer: b

Page Reference: 49–50

Objective: Module 2.2

6) Which of the following statements describes the amount of cognitive and emotional risk to participants allowed in psychological research today?

- a. Any amount of risk is acceptable.
- b. No amount of risk is acceptable.
- c. Low levels of risk are always acceptable, but more than minimal risk is never acceptable.
- d. The amount of acceptable risk depends in part on the possible benefits from the study.

Answer: d

Page Reference: 54–55

Objective: Module 2.3

7) The use of deception in psychological research is

- a. considered necessary and completely acceptable in all research.

- b. not considered acceptable.
- c. generally acceptable when shown to be absolutely necessary for the research.
- d. acceptable only in nonhuman research.

Answer: c

Page Reference: 55

Objective: Module 2.3

8) Under which of the following circumstances would the mean be the best measure of central tendency to use?

- a. The data have a normal distribution.
- b. The data are positively skewed.
- c. The data are negatively skewed.
- d. The mean is robust and always considered the best measure of central tendency.

Answer: a

Page Reference: 63

Objective: Module 2.4

9) A teacher notices that, on the last science test, some students did very well while other students performed poorly or had grades somewhere in the middle. If she wanted to measure how "spread out" the scores were, which descriptive statistic could she use?

- a. median
- b. mode
- c. standard deviation
- d. mean

Answer: c

Page Reference: 65

Objective: Module 2.4

10) Keisha performs an experiment with two randomly assigned groups of school children. The first group is allowed 15 minutes of recess play before a math test, while the second group watches a video before the test. When she analyzes the test scores, she finds that there is a statistical difference between the groups, with the recess group scoring higher, on average, on the test. Which conclusion can be drawn from this result?

- a. The difference between the scores for the two groups is not likely due to their differing pre-test activities and it is probably due to random chance.

- b. The difference between the scores for the two groups is likely due to their differing pre-test activities, and did not happen by chance.
- c. Students who are good at math prefer recess to watching a video.
- d. Students who are good at math prefer watching a video to recess.

Answer: b

Page Reference: 67–68

Objective: Module 2.4

1) What are the five characteristics of good research described in the textbook? Briefly explain each one.

Answer:

Page Reference: 31–38

2) Explain why anecdotal evidence, appeals to authority, and appeals to common sense are all considered poor forms of evidence and provide an example (not covered in the textbook) of each.

Answer:

Answer (examples will vary):

Anecdotal evidence is the experience of one person generalized into a theory, such as when a person listens to hypnosis CDs and loses 58 pounds in three months. This is anecdotal evidence and not real evidence because no hypothesis was tested in developing the theory. The weight loss could have been caused by any number of things other than the CDs. *Appeal to authority* is evidence from an "expert" that is assumed to be valid and reliable simply because an expert says it is true. An expert may claim to have found a great weight-loss program but experts can be wrong and experts can have hidden agendas. It is important to see what the expert may have to gain by claiming an untested theory is true. *Appeal to common sense* is evidence that sounds like it must be true but hasn't necessarily been tested. A great example is that people long thought that the earth was stationary and the centre of the universe because this theory made sense based on their (limited) knowledge of the cosmos. The best theory is always based on the results of hypotheses tested using the scientific method.

Page Reference: 39–40

3) Describe and compare correlational research designs and experimental research designs. Give one pro and one con for each type of design.

Answer:

Page Reference: 47–51

1) 02-3-01

Before beginning an experiment, researchers use operational definitions to define exactly how variables like "intelligence" or "happiness" will be measured.

2) 02-3-02

Demand characteristics are a major problem in psychological research, and can cause participants to change their behaviour based on how they think they are supposed to behave.

3) 02-3-03

Prior to publication in scholarly journals, papers go through a peer review process, in which they are read and critiqued by experts in the specific field of study.

4) 02-3-04

Tabitha is convinced that vaccines cause autism because her friend's child was diagnosed with autism only a week after being vaccinated. Tabitha's conclusions are based on anecdotal evidence and as such, cannot be considered reliable.

5) 02-3-05

Case studies, naturalistic observations, surveys, and questionnaires are all types of descriptive research, because they can only be used to collect observations.

6) 02-3-06

Experimental designs are the only research method that can provide strong evidence for cause-and-effect relationships.

7) 02-3-07

To study the effect of subliminal advertising on consumer behaviour, participants were randomly assigned to watch a movie either with or without subliminal advertising. The group of participants that saw the movie without the ads is called the control group .

8) 02-3-08

Research participants must give informed consent , meaning that they are told about the experiment—including any potential risks—and then freely agree to participate.

9) 02-3-09

A normal distribution is characterized by its symmetrical shape with values clustered around a mean value.

10) 02-3-10

If the difference between groups in an experiment is unlikely to have occurred by random chance alone, the difference is said to be statistically significant .

1) Which of the following is subjective?

- a. the height of a tree
- b. the speed of a reflex
- c. the weight of a soil sample
- d. the value of a painting

Answer: d

Page Reference: 31

Skill: Applied

Objective: Know the key terminology related to the principles of scientific research.

2) _____ assumes that there are facts about the world that can be observed and tested independently from the individual who describes them.

- a. Subjectivity
- b. Objectivity
- c. Validity
- d. Generalizability

Answer: b

Page Reference: 31

Skill: Conceptual

Objective: Know the key terminology related to the principles of scientific research.

3) Which of the following is one of the five characteristics of quality research listed in the textbook?

- a. using subjective measurements
- b. protecting the public from distressing results and keeping them secret
- c. making sure results can be replicated
- d. avoiding generalizing results

Answer: c

Page Reference: 31

Skill: Factual

Objective: Understand the five characteristics of quality scientific research.

4) In an effort to ensure objectivity, psychologists typically measure

- a. behaviour.
- b. introspection.
- c. thoughts.
- d. feelings.

Answer: a

Page Reference: 31

Skill: Conceptual

Objective: Understand the five characteristics of quality scientific research.

5) A group of researchers are studying depression in a sample of patients. Each researcher independently assesses the level of depression in each patient, but find that their assessments are not the same. This suggests that

- a. depression cannot be studied scientifically.
- b. the researchers are not using a reliable measurement.
- c. the results are generalizable.
- d. the patients likely do not have depression.

Answer: b

Page Reference: 32–33

Skill: Applied

Objective: Understand the five characteristics of quality scientific research.

6) In research, the object, concept, or event being measured is called a

- a. unit of data.
- b. population.
- c. variable.
- d. sample.

Answer: c

Page Reference: 31

Skill: Factual

Objective: Know the key terminology related to the principles of scientific research.

7) A researcher measures participants' blood pressure while they are shown sexual, violent, or relaxing videos. The blood pressure measurement in this study is an example of

- a. a variable.
- b. a sample.
- c. self-reporting.
- d. a demand characteristic.

Answer: a

Page Reference: 31

Skill: Applied

Objective: Know the key terminology related to the principles of scientific research.

8) In science, operational definitions are used to

- a. keep participants from knowing which treatment group they are in.
- b. reduce demand characteristics.
- c. increase ecological validity.
- d. define terms and variables so they can be objectively measured.

Answer: d

Page Reference: 32

Skill: Conceptual

Objective: Know the key terminology related to the principles of scientific research.

9) Before beginning a study on the health effects of obesity, a group of researchers agree that, for the purposes of their study, anyone with a body mass index greater than 30 kg/m² will be considered obese. This is an example of a(n)

- a. control variable.
- b. operational definition.
- c. convenience sample.
- d. dependent variable.

Answer: b

Page Reference: 32

Skill: Applied

Objective: Know the key terminology related to the principles of scientific research.

10) According to the textbook, what have researchers concluded about the "Mozart effect"?

- a. Listening to classical music, but not other types of music, causes a lasting improvement in several types of thinking and reasoning.
- b. Listening to all types of music causes a lasting improvement in several types of thinking and reasoning.
- c. Listening to classical music appears to have only a small, short-term effect on spatial reasoning in adults.
- d. Listening to classical music has no effect on any type of thinking or reasoning.

Answer: c

Page Reference: 32

Skill: Factual

Objective: Understand the five characteristics of quality scientific research.

11) _____ refers to the consistency of a measurement.

- a. Generalizability
- b. Validity
- c. Reliability
- d. Objectivity

Answer: c

Page Reference: 32

Skill: Factual

Objective: Know the key terminology related to the principles of scientific research.

12) Dr. Sparks gave Julie a new intelligence test that he personally designed, but her scores are different each time he tests her. These results suggest that Dr. Sparks' intelligence test has poor

- a. validity.
- b. generalizability.
- c. reliability.
- d. social desirability.

Answer: c

Page Reference: 32

Skill: Applied

Objective: Apply the concepts of reliability and validity to examples.

13) Dr. Hashmi is assessing patients' personalities using an "ink blot" test that she created, and is gaining confidence in the test's reliability. Which of the following is likely leading her to have increased confidence about the test's reliability?

- a. Her patients are reporting high levels of enjoyment with daily testing.
- b. Patients are generating approximately the same results each time they are tested
- c. The test seems to be measuring what it is supposed to be measuring (personality).
- d. The test appears to be objective.

Answer: b

Page Reference: 32

Skill: Applied

Objective: Apply the concepts of reliability and validity to examples.

14) Brittany, a hockey player who plays for the local university, has finished the last three years with 8, 32, and 14 points. Considering her performance, what type of player would Brittany be considered?

- a. a valid player
- b. an objective player
- c. a reliable player
- d. not a reliable player

Answer: d

Page Reference: 32

Skill: Applied

Objective: Apply the concepts of reliability and validity to examples.

15) _____ is the extent to which a measure assesses what it claims to measure.

- a. Generalizability
- b. Reliability
- c. Validity
- d. Objectivity

Answer: c

Page Reference: 32

Skill: Factual

Objective: Know the key terminology related to the principles of scientific research.

16) Jasmine took a self-administered online intelligence test three times yesterday and obtained scores of 124, 128, and 125. This made her feel great because the score she received from the psychologist last month at school was only a 95. What characteristic might the online test be lacking?

- a. reliability
- b. validity
- c. both reliability and validity
- d. nothing, the test appears to be both reliable and valid

Answer: b

Page Reference: 32

Skill: Applied

Objective: Apply the concepts of reliability and validity to examples.

17) The degree to which one set of results can be applied to other situations, individuals, or events is called

- a. objectivity.
- b. reliability.
- c. validity.
- d. generalizability.

Answer: d

Page Reference: 33

Skill: Factual

Objective: Know the key terminology related to the principles of scientific research.

18) To increase the generalizability of their results, researchers try to study a _____ sample of participants.

- a. small
- b. large
- c. single-person
- d. convenience

Answer: b

Page Reference: 33–34

Skill: Factual

Objective: Know the key terminology related to the principles of scientific research.

19) Which of the following is TRUE?

- a. Researchers typically study whole populations because it the most efficient method for gathering data.
- b. Researchers typically study samples because it is often too difficult to study whole populations.
- c. Researchers typically aim to include both samples and populations in their research.
- d. Researchers typically avoid studying both populations and samples to avoid researcher bias.

Answer: b

Page Reference: 33–34

Skill: Factual

Objective: Know the key terminology related to the principles of scientific research.

20) The most important factor to ensure that results from one study will generalize in other settings, is to use

- a. a convenience sample.
- b. small sample sizes.
- c. random assignment.
- d. a random sample.

Answer: d

Page Reference: 33–34

Skill: Factual

Objective: Know the key terminology related to the principles of scientific research.

21) Researchers at Universities often use Psychology students as their participants because they are readily available and eager to volunteer. This form of a sample is referred to as a(n) _____ sample.

- a. random
- b. confound

- c. ecological
- d. convenience

Answer: d

Page Reference: 33–34

Skill: Applied

Objective: Know the key terminology related to the principles of scientific research.

22) *Ecological validity* refers to

- a. whether the results of a laboratory study can be applied to the real world.
- b. the impact of a scientific study on the environment.
- c. the degree to which animal research can be applied to humans.
- d. the degree to which naturalistic research techniques are used.

Answer: a

Page Reference: 34

Skill: Conceptual

Objective: Know the key terminology related to the principles of scientific research.

23) Ursula works in an office. One day, her boss tells her that upper-management will be in the office to observe employee productivity. Because she knows she is being observed, Ursula works harder than she normally does, a phenomenon known as

- a. the placebo effect.
- b. the Heisenberg principle.
- c. ecological validity.
- d. the Hawthorne effect.

Answer: d

Page Reference: 34

Skill: Applied

Objective: Understand how biases might influence the outcome of a study.

24) The term *demand characteristics* refers to

- a. a set of personality traits that most good scientists share.
- b. unintended cues that suggest how study participants should behave.
- c. statements that describe the specific measures that are used to record observations.

d. the specific set of instructions for an experiment.

Answer: b

Page Reference: 35–36

Skill: Conceptual

Objective: Understand how biases might influence the outcome of a study.

25) Bandar is participating in a survey on undergraduate drug use. When the interviewer asks Bandar whether he has used illegal drugs in the last 6 months, he lies and says "no" because he knows drug use is frowned upon by many people. Bandar's response is an example of

- a. socially desirable responding.
- b. the Hawthorne effect.
- c. experimenter bias.
- d. over-generalization.

Answer: a

Page Reference: 34

Skill: Applied

Objective: Understand how biases might influence the outcome of a study.

26) Priya, a university student, wants to know how many of the students living in her residence have tried cannabis, so she decides to interview everyone in her building. Despite rumours to the contrary, the results suggest that fewer than five percent of her classmates have tried the drug. What is the most likely explanation for her findings?

- a. The student responses were influenced by social desirability.
- b. Priya's question was unclear.
- c. Priya miscalculated the results.
- d. Interviews often lead to exaggerated results.

Answer: a

Page Reference: 34

Skill: Applied

Objective: Understand how biases might influence the outcome of a study.

27) Eila is participating in a psychological experiment for one of the graduate students at her university. She is fairly certain that she knows the true intent of the study and is trying to answer the questions accordingly. Eila is adjusting her responses based on

- a. the Hawthorne effect.
- b. social desirability bias.
- c. observer bias.
- d. demand characteristics.

Answer: d

Page Reference: 35–36

Skill: Applied

Objective: Understand how biases might influence the outcome of a study.

28) The risk of bias in a research study is that biases can lead us

- a. to become anxious or depressed about our knowledge of the world.
- b. to draw incorrect conclusions and then become convinced that they are accurate.
- c. to doubt our intuition and gut feelings in important real-life circumstances.
- d. to underestimate our general levels of cognitive abilities and skills.

Answer: b

Page Reference: 34–37

Skill: Conceptual

Objective: Understand how biases might influence the outcome of a study.

29) One difficulty in conducting medical research is that participants often assume that the treatment will be effective in alleviating their symptoms, hence they report that their symptoms are alleviated. Therefore, a researcher must design an experiment that accounts for the possible influence of

- a. random selection.
- b. medical confounds.
- c. the Rosenthal effect.
- d. the placebo effect.

Answer: d

Page Reference: 37

Skill: Conceptual

Objective: Understand how biases might influence the outcome of a study.

30) When people report feeling better after taking medication even though it hasn't had time to exert any physical effects, they are experiencing

- a. the experimenter bias effect.
- b. low reliability.
- c. the placebo effect.
- d. confirmation bias.

Answer: c

Page Reference: 37

Skill: Conceptual

Objective: Understand how biases might influence the outcome of a study.

31) Dr. Wilkins randomly assigns subjects to one of two groups. He is interested in the effects of caffeine on anxiety levels. He gives subjects in the first group an extra two cups of coffee a day for six months. The second group receives an extra two cups of decaffeinated coffee a day for the same time period. Importantly, subjects do not know whether they are being given regular or decaffeinated coffee. By providing one group with decaffeinated coffee, Dr. Wilkins is trying to account for which potential element of the experiment?

- a. the Hawthorne effect
- b. generalizability
- c. the placebo effect
- d. variability

Answer: c

Page Reference: 37

Skill: Applied

Objective: Understand how biases might influence the outcome of a study.

32) Elle, a university student, had a great time at a party last night. She danced, sang karaoke, and played the Rock Band video game—all behaviours that she had never exhibited in public before. She had been drinking the "punch" all night long, which she was told contained a lot of alcohol. Elle was quite surprised to find out the next morning that the punch did NOT contain any alcohol. What may explain Elle's behaviour at the party?

- a. the Hawthorne effect
- b. confirmation bias
- c. the nocebo effect

d. the placebo effect

Answer: d

Page Reference: 37

Skill: Applied

Objective: Understand how biases might influence the outcome of a study.

33) What is the best way to reduce the social desirability bias in research?

- a. use random sampling
- b. provide anonymity and confidentiality
- c. use random assignment
- d. submit the research to peer review

Answer: b

Page Reference: 36–37

Skill: Conceptual

Objective: Understand how biases might influence the outcome of a study.

34) In a single-blind study, who is "blind" to the treatment?

- a. the peer reviewers
- b. the participants
- c. the experimenters
- d. both the experimenters and participants

Answer: b

Page Reference: 37

Skill: Factual

Objective: Know the key terminology related to the principles of scientific research.

35) An experiment is said to be _____ when neither researchers nor participants are aware of who is in the experimental or control group.

- a. single-blind
- b. generalizable
- c. peer-reviewed
- d. double-blind

Answer: d

Page Reference: 37

Skill: Factual

Objective: Know the key terminology related to the principles of scientific research.

36) Dr. Leblanc is conducting a clinical drug trial. She wants to reduce bias as much as possible, so she has her assistant label the different drug doses as A, B, or C. Neither Dr. Leblanc or her patients know which dose of the drug the patients are receiving. This experimental design is known as a _____ study.

- a. single-blind
- b. placebo
- c. peer-reviewed
- d. double-blind

Answer: d

Page Reference: 37

Skill: Applied

Objective: Know the key terminology related to the principles of scientific research.

37) The process by which experts in a field carefully critique the work of their colleagues prior to publication, is known as

- a. ecological validation.
- b. social desirability.
- c. peer review.
- d. replication

Answer: c

Page Reference: 38

Skill: Conceptual

Objective: Know the key terminology related to the principles of scientific research.

38) The peer review process is designed to

- a. limit alternative therapies from being made available to the general public.
- b. identify potential flaws in a research study's methods, findings, and conclusions.
- c. eliminate the placebo effect.
- d. translate scientific journal articles into easy-to-understand articles for social media.

Answer: b

Page Reference: 38

Skill: Conceptual

Objective: Understand the five characteristics of quality scientific research.

39) Without the process of replication as part of the scientific process, what would happen?

- a. Incorrect results would often go uncorrected.
- b. Demand characteristics would have a larger effect on data.
- c. The Hawthorne effect would increase.
- d. Samples would be less representative of the populations they came from.

Answer: a

Page Reference: 38

Skill: Conceptual

Objective: Understand the five characteristics of quality scientific research.

40) The main purpose of replicating research is to

- a. keep the scientific community up-to-date on current findings.
- b. renew drug and technology patents based on the research.
- c. ensure that the findings are correct and not statistical flukes.
- d. increase a researcher's number of publications.

Answer: c

Page Reference: 38

Skill: Conceptual

Objective: Understand the five characteristics of quality scientific research.

41) Chen believes that red cars are more likely to be stolen than non-red cars because one week after she bought a red car, it was stolen. This is an example of which type of evidence?

- a. anecdotal
- b. falsified
- c. common-sense
- d. authoritative

Answer: a

Page Reference: 39

Skill: Applied

Objective: Analyze whether anecdotes, authority figures, and common sense are reliably truthful sources of information.

42) Support for a claim that is based on a story about an individual or event is called _____ evidence.

- a. anecdotal
- b. narrative
- c. objective
- d. socially desirable

Answer: a

Page Reference: 39

Skill: Factual

Objective: Analyze whether anecdotes, authority figures, and common sense are reliably truthful sources of information.

43) In general, which of the following is TRUE about anecdotal evidence?

- a. It is reliable as long as it comes from an expert.
- b. It is an efficient method for gathering complex data.
- c. It is the basis for most scientific conclusions.
- d. It is poor and unreliable evidence.

Answer: d

Page Reference: 39

Skill: Conceptual

Objective: Analyze whether anecdotes, authority figures, and common sense are reliably truthful sources of information.

44) Appeals to authority are generally considered a(n) _____ form of evidence because _____.

- a. reliable; expertise is equivalent to evidence
- b. reliable; experts would not present erroneous information
- c. unreliable; experts are unable to assess the quality of their research

d. unreliable; expertise is not equivalent to evidence

Answer: d

Page Reference: 40

Skill: Conceptual

Objective: Analyze whether anecdotes, authority figures, and common sense are reliably truthful sources of information

45) Claims based on common sense

- a. are high in ecological validity.
- b. should be considered false, unless stated by a scientist.
- c. may be true, but require scientific evidence for support.
- d. should be considered true, but only if the majority of the public supports the claim.

Answer: c

Page Reference: 40

Skill: Conceptual

Objective: Analyze whether anecdotes, authority figures, and common sense are reliably truthful sources of information.

46) Kia and her friend are discussing why so many child actors become troubled adults. Kia says, "Everyone knows that if a child is spoiled, they will not develop the coping skills needed in adulthood." From a scientific point of view, what is wrong with Kia's statement?

- a. It is based on anecdotal evidence.
- b. It is an appeal to authority.
- c. It is an appeal to common sense.
- d. Nothing; it is a well-supported conclusion.

Answer: c

Page Reference: 40

Skill: Applied

Objective: Analyze whether anecdotes, authority figures, and common sense are reliably truthful sources of information.

47) When designing a study, researchers must take into account all of the following factors EXCEPT

- a. how to best organize the stimuli to test the hypothesis.
- b. how to analyze the data to prove the hypothesis.
- c. how they will gather the data.
- d. how they will analyze and interpret the results.

Answer: b

Page Reference: 42–43

Skill: Conceptual

Objective: Apply the terms and concepts of experimental methods to research examples.

48) _____ research does not attempt to explain how or why something happened, but instead it is an opportunity to present observations about the characteristics of the subject.

- a. Descriptive
- b. Quasi-experimental
- c. Experimental
- d. Correlational

Answer: a

Page Reference: 43

Skill: Factual

Objective: Know the key terminology related to research designs.

49) Which of the following is NOT a descriptive research method?

- a. case study
- b. naturalistic observation
- c. experiment
- d. survey

Answer: c

Page Reference: 43–46

Skill: Factual

Objective: Know the key terminology related to research designs.

50) A(n) _____ involves describing a single individual's behaviour in great detail, rather than testing a specific hypothesis.

- a. case study
- b. correlational study
- c. experiment
- d. naturalistic observation study

Answer: a

Page Reference: 43

Skill: Factual

Objective: Know the key terminology related to research designs.

51) Fudah, a graduate student in psychology, just heard about a five-year-old child who has already learned calculus. She is thinking about conducting an in-depth study of the child for her thesis. What research method is Fudah considering?

- a. naturalistic observation
- b. experimental
- c. correlational
- d. case study

Answer: d

Page Reference: 43

Skill: Applied

Objective: Apply terms and concepts of experimental methods to research examples.

52) Why is it difficult to make generalizations based on the results of case study research?

- a. Case studies are typically conducted over a very short period of time, making generalizations about long-term effects difficult.
- b. Case studies are conducted in strict laboratory environments, which reduces ecological validity.
- c. Since a case study involves only one or a few subjects, their actions may be atypical and not representative of a larger group of people or population.
- d. The statistics involved in case study research do not allow one to draw larger conclusions about a population.

Answer: c

Page Reference: 43–45

Skill: Conceptual

Objective: Analyze the pros and cons of descriptive, correlational, and experimental research designs.

53) Which of the following statements is TRUE about naturalistic observation?

- a. It recreates natural conditions in the laboratory as closely as possible to make an experiment more ecologically valid.
- b. It involves observing behaviour of organisms in their natural environment.
- c. It focuses on environmental research.
- d. It involves observing behaviour in the lab without the use of technological instruments.

Answer: b

Page Reference: 45–46

Skill: Factual

Objective: Know the key terminology related to research designs.

54) Measuring or recording behaviour in a real-world setting is known as

- a. a case study.
- b. a correlational study.
- c. naturalistic observation.
- d. a self-report.

Answer: c

Page Reference: 45–46

Skill: Factual

Objective: Know the key terminology related to research designs.

55) Dr. Deska was interested in social hierarchies in teenagers, so he went to the local high school and observed students' interactions during break periods. Dr. Deska is using _____ to gather his data.

- a. a case study
- b. naturalistic observation
- c. an experimental design
- d. a peer review process

Answer: b

Page Reference: 45–46

Skill: Applied

Objective: Apply the terms and concepts of experimental methods to research examples.

56) A researcher is interested in determining how frequently bullying behaviour occurs in real-life settings. This researcher would best be advised to use a(n) _____ design.

- a. case study
- b. correlational
- c. experimental
- d. naturalistic observation

Answer: d

Page Reference: 45–46

Skill: Applied

Objective: Apply the terms and concepts of experimental methods to research examples.

57) _____ is a method where researchers typically use interviews, phone surveys, and questionnaires to directly collect responses from the people being studied.

- a. Naturalistic observation
- b. Random sampling
- c. Self-reporting
- d. Blind sampling

Answer: c

Page Reference: 46

Skill: Conceptual

Objective: Know the key terminology related to the principles of scientific research.

58) Dr. Potter, a psychology professor, is curious about his students' attitudes toward marginalized populations. What research method is he most likely to use to gather information about this topic?

- a. naturalistic observation
- b. survey
- c. experiment
- d. correlational study

Answer: b

Page Reference: 46

Skill: Applied

Objective: Apply the terms and concepts of experimental methods to research examples.

59) If you are interested in examining the relationship between a student's grade and the number of classes they missed, you would likely use a(n) _____ to study this relationship.

- a. case study design
- b. correlational design
- c. experimental design
- d. naturalistic observation design

Answer: b

Page Reference: 47

Skill: Applied

Objective: Apply the terms and concepts of experimental methods to research examples.

60) Two variables are said to be correlated when scores on one variable

- a. do not increase or decrease with the scores on the second variable.
- b. increase or decrease with the scores on the second variable.
- c. directly cause the scores on the second variable.
- d. differ from the scores on the second variable.

Answer: b

Page Reference: 47

Skill: Factual

Objective: Understand what it means when variables are positively or negatively correlated.

61) "As one variable increases, the other decreases." This statement describes a _____ correlation.

- a. positive
- b. weak
- c. strong
- d. negative

Answer: d

Page Reference: 47

Skill: Factual

Objective: Understand what it means when variables are positively or negatively correlated.

62) As the average daily temperature in Edmonton, Alberta, *decreases* the number of persons who are observed drinking iced coffee *decreases*. This is an example of a(n) _____ correlation.

- a. unrelated
- b. negative
- c. positive
- d. strong

Answer: c

Page Reference: 47

Skill: Applied

Objective: Understand what it means when variables are positively or negatively correlated.

63) Often, the amount of time a student spends studying is _____ correlated with the student's grades.

- a. negatively
- b. not
- c. positively
- d. inversely

Answer: c

Page Reference: 47

Skill: Applied

Objective: Understand what it means when variables are positively or negatively correlated.

64) There is a negative correlation between wearing one's seat belt and the severity of injuries received during an accident. Which statement correctly illustrates this correlation?

- a. The more often you wear your seat belt, the more serious the injury you are likely to receive in an accident.

- b. The more you wear your seat belt, the less likely you are to suffer serious injuries in an accident.
- c. Wearing your seatbelt prevents you from being injured in an accident.
- d. Failing to wear your seat belt increases the likelihood that you will sustain serious injuries in an accident.

Answer: b

Page Reference: 47

Skill: Applied

Objective: Understand what it means when variables are positively or negatively correlated.

65) A graph that can be used to illustrate the pattern of the relationship between scores from two variables is called a

- a. bar graph.
- b. line graph.
- c. pie chart.
- d. scatterplot.

Answer: d

Page Reference: 49

Skill: Factual

Objective: Know the key terminology related to research designs.

66) Dr. Schott's scatterplot reveals no real patterns or clusters. In fact, the data points appear completely random on the graph. This pattern of results is most likely from which type of correlation?

- a. positive
- b. zero
- c. negative
- d. skewed

Answer: b

Page Reference: 47

Skill: Applied

Objective: Understand what it means when variables are positively or negatively correlated.

67) Dr. Oickle is trying to determine which type of correlation is represented on her scatterplot. She notes that nearly all the data are clustered along a diagonal line running from top left to bottom-right. What would be the correct interpretation of the data?

- a. There appears to be a positive correlation.
- b. There appears to be no correlation.
- c. There appears to be a negative correlation.
- d. We need more information to draw a conclusion.

Answer: c

Page Reference: 47

Skill: Applied

Objective: Understand what it means when variables are positively or negatively correlated.

68) Mr. Gauthier, a sixth-grade science teacher, has tried to predict his students' end-of-the-year grades by looking at their grades from the previous year. Unfortunately, there does not seem to be any systematic relationship between these two variables. Which of the following coefficients best fits this scenario?

- a. $+0.01$
- b. -0.92
- c. -0.36
- d. $+0.89$

Answer: a

Page Reference: 47

Skill: Applied

Objective: Understand what it means when variables are positively or negatively correlated.

69) Which correlation coefficient is most likely to describe the relationship between brushing one's teeth and the number of cavities one gets?

- a. -0.62
- b. $+0.83$
- c. -0.08
- d. $+0.45$

Answer: a

Page Reference: 47

Skill: Applied

Objective: Understand what it means when variables are positively or negatively correlated.

70) A correlation coefficient will always range between

- a. 0 and +1.
- b. -10 and +10.
- c. 0% and 100%.
- d. -1.0 and +1.0.

Answer: d

Page Reference: 47

Skill: Factual

Objective: Understand what it means when variables are positively or negatively correlated.

71) Which of the following correlations represents the weakest degree of relation between two variables?

- a. Daily calcium intake and bone mass density = +.11
- b. Degree of exposure to lead and IQ scores in children = -.12
- c. Hours of exposure to media violence and aggressive behaviour = +.31
- d. Number of cigarettes smoked per day and incidence of lung cancer = +.39

Answer: a

Page Reference: 47

Skill: Applied

Objective: Understand what it means when variables are positively or negatively correlated.

72) Which of the following correlation coefficients represents the strongest degree of relation between two variables?

- a. +.19
- b. -.25
- c. +.43

d. -.47

Answer: d

Page Reference: 47

Skill: Conceptual

Objective: Understand what it means when variables are positively or negatively correlated.

73) Correlational research designs are NOT appropriate for purposes of

- a. determining causation.
- b. describing relationships.
- c. predicting possible outcomes.
- d. understanding the association between two variables.

Answer: a

Page Reference: 47

Skill: Factual

Objective: Analyze the pros and cons of descriptive, correlational, and experimental research designs

74) The perception of a statistical association between two variables where none exists is known as _____.

- a. confirmation bias
- b. an illusory correlation
- c. a negative correlation
- d. a third variable problem

Answer: b

Page Reference: 48

Skill: Conceptual

Objective: Know the key terminology related to research designs.

75) When asked if there are more ice cream cones sold in November or July, Mary answers "July" immediately. Then, she is surprised to find out that there is little to no difference between the two months in terms of ice-cream-cone sales. Mary's error exemplifies

- a. an imaginary correlation.

- b. a negative correlation.
- c. a positive correlation.
- d. an illusory correlation.

Answer: d

Page Reference: 48

Skill: Applied

Objective: Know the key terminology related to research designs.

76) Dr. Janusz conducts a correlational study and finds a strong negative relationship between behavioural issues in children and the amount of time the parents spend with the child. Dr. Janusz immediately holds a press conference warning parents that spending less time with their children will cause behavioural issues. Was this the appropriate conclusion for Dr. Janusz to draw?

- a. Yes, researchers can conclude causation as long as it is a strong correlation.
- b. Yes, Dr. Janusz's results were strong and are in agreement with common sense.
- c. No, a third variable might be impacting both variables (e.g., poverty).
- d. No, Dr. Janusz is reporting on an illusory correlation.

Answer: c

Page Reference: 47–48

Skill: Applied

Objective: Analyze the pros and cons of descriptive, correlational, and experimental research designs

77) _____ are the only form of research that allow one to make inferences about causation.

- a. Descriptive designs
- b. Correlational designs
- c. Experimental designs
- d. Naturalistic observations

Answer: c

Page Reference: 49

Skill: Factual

Objective: Understand how experiments help demonstrate cause-and-effect relationships.

78) What is the main difference between an experiment and a correlational study?

- a. A correlational study involves the manipulation of variables, while an experiment does not.
- b. An experiment uses random sampling, while a correlational study uses random assignment.
- c. A correlational study looks at the relationship between independent and dependent variables, while an experiment looks at the relationship between confounding variables.
- d. An experiment involves the manipulation of variables, while a correlational study does not.

Answer: d

Page Reference: 49

Skill: Factual

Objective: Understand how experiments help demonstrate cause-and-effect relationships.

79) One key aspect of an experiment that is missing in other research designs is

- a. the ability to test predictions.
- b. the use of variables.
- c. the use of operational definitions.
- d. random assignment.

Answer: d

Page Reference: 49

Skill: Factual

Objective: Understand how experiments help demonstrate cause-and-effect relationships.

80) A research design characterized by the random assignment of participants to conditions is called a(n)

- a. quasi-experimental design.
- b. random sample.
- c. experimental design.
- d. correlational design.

Answer: c

Page Reference: 49

Skill: Conceptual

Objective: Understand how experiments help demonstrate cause-and-effect relationships.

81) Professor Golder is studying hyperactivity in preschool-age children. She is concerned that differences in child rearing, diet, and home environment may affect her results. To minimize these potential pre-existing variables, she should be sure to do which of the following?

- a. Use random assignment when forming her groups.
- b. Include more than one independent variable.
- c. Only measure a single dependent variable.
- d. Only select children from homes with a high socioeconomic status (SES).

Answer: a

Page Reference: 49

Skill: Applied

Objective: Apply the terms and concepts of experimental methods to research examples.

82) Why is it important to make sure that different participant groups are roughly equivalent in terms of personal characteristics (e.g., age, gender) before any independent variable is introduced?

- a. It is important to treat all research participants equally so that they feel that they are not being manipulated.
- b. Research ethics forbid any experiment to take place when the participant groups are fundamentally different from each other.
- c. It is important so that no major differences between the groups inadvertently bias the results of the experiment.
- d. Research ethics required all participants in a sample to have the same personal characteristics.

Answer: c

Page Reference: 49-50

Skill: Conceptual

Objective: Understand how experiments help demonstrate cause-and-effect relationships.

83) The _____ variable is what the experimenter manipulates (or varies).

- a. confounding
- b. dependent
- c. experimental

d. independent

Answer: d

Page Reference: 50

Skill: Factual

Objective: Know the key terminology related to research designs.

84) The variable that an experimenter measures is called the

- a. control variable.
- b. confounding variable.
- c. dependent variable.
- d. independent variable.

Answer: c

Page Reference: 50

Skill: Factual

Objective: Know the key terminology related to research designs.

85) An administrator believes that the placement of motivational posters on the walls in classrooms of academic buildings will lead to better grades at his school. To test his theory, he randomly assigns certain classrooms within the university's Faculty of Science to have the posters while others do not. None of the remaining four faculties will have any posters placed in their classrooms. What is the independent variable in this study?

- a. the five different faculties
- b. the presence or absence of classroom posters
- c. the classrooms
- d. student grades

Answer: b

Page Reference: 50

Skill: Applied

Objective: Apply the terms and concepts of experimental methods to research examples.

86) A medical doctor believes that the presence of aromatherapy candles will reduce the anxiety of first-time mothers-to-be during labour and will increase their reported satisfaction with their care at his hospital. He randomly assigns mothers to give birth in a room either with or without aromatherapy candles. What is the independent variable in this example?

- a. anxiety levels during labour
- b. labour duration
- c. room environment (presence or absence of candles)
- d. reported satisfaction with hospital care

Answer: c

Page Reference: 50

Skill: Applied

Objective: Apply the terms and concepts of experimental methods to research examples.

87) Professor McCormick decides to test her hypothesis that eating chocolate prior to exams increases students' test scores. She randomly assigns students to two groups at the beginning of the semester. One group receives a bar of chocolate before each test, while the other group receives another type of candy. She compares their scores at the end of the year and finds that the students who ate the chocolate scored an average of ten points higher on their exams. What is the dependent variable in this experiment?

- a. students' test scores
- b. chocolate bars
- c. the students themselves
- d. the exams themselves

Answer: a

Page Reference: 50

Skill: Applied

Objective: Apply the terms and concepts of experimental methods to research examples.

88) Professor McCormick decides to test her hypothesis that eating chocolate prior to exams increases students' test scores. She randomly assigns students to two groups at the beginning of the semester. One group receives a bar of chocolate before each test, while the other group receives another type of candy. She compares their scores at the end of the year, and finds that the students who ate the chocolate scored an average of ten points higher on their exams. What is a fair conclusion that can be drawn from this experiment?

- a. Eating chocolate causes students' test scores to increase.
- b. Eating chocolate is negatively correlated with students' test scores.
- c. Eating chocolate likely increases students' level of happiness.
- d. Eating chocolate increases general intelligence.

Answer: a

Page Reference: 50

Skill: Applied

Objective: Apply terms and concepts of experimental methods to research examples.

89) A(n) _____ variable is one that is outside of the experimenter's control.

- a. confounding
- b. dependent
- c. independent
- d. random

Answer: a

Page Reference: 49–50

Skill: Factual

Objective: Know the key terminology related to research designs.

90) In an experiment, the _____ group receives no manipulation.

- a. control
- b. dependent
- c. independent
- d. experimental

Answer: a

Page Reference: 50

Skill: Factual

Objective: Know the key terminology related to research designs.

91) A researcher wants to see whether she can make the typical administrative assistant job more motivating at Acme, Inc. To experimentally investigate this possibility, she randomly assigns administrative assistants to one of the following conditions: (I) doing the job as it has always been done, (II) having a computer performance monitoring device installed, (III) receiving feedback about their performance on a weekly basis, or (IV) being given a say in how one's workload is structured and done. Which of the preceding conditions is an example of a control group?

- a. being given a say in how one's workload is structured and done
- b. doing the job as it has always been done
- c. having a computer performance monitoring device installed

d. receiving feedback on a weekly basis

Answer: b

Page Reference: 50

Skill: Applied

Objective: Apply the terms and concepts of experimental methods to research examples.

92) Ryan, a professional bass fisherman, is trying to determine which lure is most effective: the scented silicone worm he normally uses or the new minnow-style lure he bought yesterday. Based on this scenario, what would constitute the control?

- a. the new minnow lure
- b. the scented silicone worm
- c. both the minnow lure and the silicone worm
- d. there is no control in this example

Answer: b

Page Reference: 50

Skill: Applied

Objective: Apply the terms and concepts of experimental methods to research examples.

93) Dr. Johansen randomly assigned subjects to three different groups during her last experiment. She then proceeded to give all the participants in the experiment a new study technique designed to enhance their learning for the upcoming test. What critical error did she make during her experiment?

- a. She failed to identify the independent variable.
- b. She failed to identify the dependent variable.
- c. She failed to include an experimental group.
- d. She failed to include a control group.

Answer: d

Page Reference: 50

Skill: Applied

Objective: Apply the terms and concepts of experimental methods to research examples.

94) The group that receives the manipulation of an independent variable is called the

- a. control group.
- b. dependent group.

- c. experimental group.
- d. independent group.

Answer: c

Page Reference: 50

Skill: Factual

Objective: Know the key terminology related to research designs.

95) Quasi-experimental designs are similar to experimental designs, except in quasi-experimental designs

- a. random assignment is not possible.
- b. there is more than one independent variable.
- c. there is more than one dependent variable.
- d. there is no dependent variable.

Answer: a

Page Reference: 50

Skill: Factual

Objective: Know the key terminology related to research designs.

96) If researchers wanted to study the effect of various factors on reaction time, which factor would require the researchers to use a quasi-experimental design instead of an experimental design?

- a. alcohol
- b. sleep deprivation
- c. gender
- d. caffeine

Answer: c

Page Reference: 50

Skill: Conceptual

Objective: Know the key terminology related to research designs.

97) The MKUltra project is often cited as an example of

- a. unethical research on animals.
- b. unethical research on humans.

- c. necessary deception in research.
- d. the effective use of strict ethical guidelines in research.

Answer: b

Page Reference: 53

Skill: Factual

Objective: Apply the ethical principles of scientific research to examples.

98) What is the purpose of a research ethics board?

- a. to help protect research participants from unnecessary risk
- b. to slow the research process by placing hurdles in the way of researchers
- c. to help protect universities and institutions from lawsuits
- d. to raise funds for ongoing research

Answer: a

Page Reference: 54

Skill: Factual

Objective: Know the key terminology of research ethics.

99) Kendra serves on a committee whose job is to review proposed psychology studies. The committee refuses to approve one study because it feels the possible benefit from the research is too little given the potential risk to the participants. Kendra's committee is most accurately called

- a. an ethics commission.
- b. the psychological harm board.
- c. the academic safety advisory committee.
- d. the research ethics board.

Answer: d

Page Reference: 54

Skill: Applied

Objective: Know the key terminology of research ethics.

100) According to the textbook, which of the following is true about studies that potentially increase mortality salience in participants?

- a. Studies that increase mortality salience increase the incidence of suicide in their participants.

- b. Studies that increase mortality salience are considered unethical.
- c. Stress from mortality salience is typically short term and can be considered an acceptable risk.
- d. Studies that increase mortality salience are always acceptable.

Answer: c

Page Reference: 54

Skill: Factual

Objective: Know the key terminology of research ethics.

101) What is informed consent?

- a. Volunteers agree to participate in a study after the purpose, tasks, and risks of the study are explained to them.
- b. Research ethics boards (REBs) must be informed about the purpose, tasks, and risks of a study before they approve it.
- c. Researchers agree to be legally responsible for the physical and psychological safety of their participants.
- d. Participants must be informed of the results of the study they participated in and give their consent before the research is published.

Answer: a

Page Reference: 55

Skill: Conceptual

Objective: Know the key terminology of research ethics.

102) Which of these is an essential component of ethical human research?

- a. Research participants must give informed consent.
- b. Research participants must personally benefit from the research.
- c. Research participants must be compensated (paid) for their participation.
- d. By providing informed consent, participants must complete the experiment in its entirety.

Answer: a

Page Reference: 55

Skill: Conceptual

Objective: Know the key terminology of research ethics.

103) What effect does the planned use of deception have on the approval of a study by a Research Ethics Board (REB)?

- a. Studies with deception can be approved, but only if the deception is necessary and the risk to participants is minimal.
- b. The use of deception has no effect on the whether the study will be approved by the REB.
- c. Studies that involve deception go through a more rigorous approval process.
- d. Studies with deception are considered unethical and are rarely approved.

Answer: a

Page Reference: 55–56

Skill: Factual

Objective: Analyze the role of using deception in psychological research.

104) Professor Wagner has just completed an experiment. He is now explaining to his subjects the purpose behind the experiment and giving them a general description of the results. Professor Wagner is engaging in what aspect of a research study?

- a. debriefing
- b. informed consent
- c. ethical review
- d. deception

Answer: a

Page Reference: 56

Skill: Applied

Objective: Know the key terminology of research ethics.

105) Participants in modern psychology experiments are given the right to

- a. select which treatment group they are in.
- b. withdraw from a study or withhold responses to questions they feel uncomfortable answering.
- c. review the results of the study before they are published.
- d. write a formal response to the published paper.

Answer: b

Page Reference: 56

Skill: Factual

Objective: Apply the ethical principles of scientific research to examples.

106) Confidentiality requires researchers to do which of the following?

- a. Provide complete anonymity when collecting data.
- b. Erase all confidential data as soon as the results of the study are published.
- c. Use a double-blind procedure.
- d. Remove any specific information that can be connected with a participant when sharing data.

Answer: d

Page Reference: 56

Skill: Conceptual

Objective: Apply the ethical principles of scientific research to examples.

107) Dr. Novella wants to know the effects of removing portions of one's hippocampi (an area of the brain) on long-term memory, in the hopes of one day finding a cure for patients with Alzheimer's disease. The subjects for his study are most likely to be

- a. humans.
- b. nonhuman animals.
- c. robots.
- d. insects.

Answer: b

Page Reference: 56–58

Skill: Applied

Objective: Understand why animals are often used in scientific research.

108) According to the textbook, which of the following is true of the use of animal research in psychology?

- a. Animal research is important for several reasons and requires attention to many of the same ethical issues that apply to human research.
- b. Animal research is generally regarded as cruel and unnecessary.
- c. Animal research does not help the advancement of our understanding of human behaviour.
- d. Animal research is useful because risk and discomfort to nonhuman subjects do not need to go through ethical review.

Answer: a

Page Reference: 56–59

Skill: Conceptual

Objective: Understand why animals are often used in scientific research.

109) Which of the following is an advantage of using nonhuman subjects in psychological research?

- a. Research on nonhumans does not have to be reviewed by ethics committees.
- b. Many lab animals have relatively short life spans, so several generations can be observed.
- c. Researchers do not have to justify risk and discomfort with the potential scientific value of the research.
- d. There are no advantages of animal research over human research.

Answer: b

Page Reference: 56–59

Skill: Conceptual

Objective: Understand why animals are often used in scientific research.

110) In general, what should researchers do with data after the results of a study have been published?

- a. Destroy it immediately.
- b. Keep it forever.
- c. Keep it secure for around 25 to 50 years.
- d. Keep it secure for around 3 to 5 years.

Answer: d

Page Reference: 59

Skill: Factual

Objective: Understand the importance of reporting and storing data.

111) _____ are a set of techniques used to organize, summarize, and interpret data.

- a. Central tendencies
- b. Inferential statistics
- c. Distributions

d. Descriptive statistics

Answer: d

Page Reference: 63

Skill: Factual

Objective: Know the key terminology of statistics.

112) To organize and summarize a large set of data, researchers use a set of mathematical techniques called

- a. distribution statistics.
- b. inferential statistics.
- c. descriptive statistics.
- d. variability tests.

Answer: c

Page Reference: 63

Skill: Conceptual

Objective: Know the key terminology of statistics.

113) Which of the following is the correct description of *frequency*?

- a. the number of observations that fall within a certain category or range of scores
- b. a measure of how spread out values are within a distribution
- c. a measure of the central point of a distribution
- d. the distance between the highest and lowest value in a distribution

Answer: a

Page Reference: 63

Skill: Conceptual

Objective: Know the key terminology of statistics.

114) What does the height of the bars on a histogram indicate?

- a. mean
- b. range
- c. frequency
- d. score or value

Answer: c

Page Reference: 63

Skill: Factual

Objective: Apply your knowledge to interpret the most frequently used types of graphs.

115) The scores on most standardized tests have a _____ distribution.

- a. normal
- b. positively skewed
- c. negatively skewed
- d. bimodal

Answer: a

Page Reference: 63

Skill: Factual

Objective: Know the key terminology of statistics.

116) A teacher is disappointed to find that most of her students' test scores are clustered together at the low end of the grading scale, with only a few students having high grades. If she were to graph the distribution, what shape would you expect it to have?

- a. normal
- b. positively skewed
- c. negatively skewed
- d. central

Answer: b

Page Reference: 63

Skill: Applied

Objective: Apply your knowledge to interpret the most frequently used types of graphs.

117) A frequency distribution with a cluster of scores on the far right and a long tail to its left is a _____ distribution.

- a. negatively skewed
- b. positively skewed
- c. normal
- d. biased

Answer: a

Page Reference: 63

Skill: Factual

Objective: Know the key terminology of statistics.

118) Which of the following is a measure of central tendency?

- a. mode
- b. variability
- c. range
- d. standard deviation

Answer: a

Page Reference: 63–65

Skill: Factual

Objective: Know the key terminology of statistics.

119) A university president asks the head of the data analytics department if more students come from cities or rural locales. What measure of central tendency is she asking about?

- a. mean
- b. median
- c. mode
- d. range

Answer: c

Page Reference: 63–64

Skill: Applied

Objective: Know the key terminology of statistics.

120) If a set of data has a perfectly normal distribution, which measure of central tendency should be used?

- a. mean
- b. median
- c. mode
- d. It doesn't matter; they will be the same.

Answer: d

Page Reference: 63–65

Skill: Factual

Objective: Analyze the choice of central tendency statistics based on the shape of the distribution.

121) If a set of data has a skewed distribution, which measure of central tendency should be used?

- a. mean
- b. median
- c. mode
- d. standard deviation

Answer: b

Page Reference: 63–65

Skill: Factual

Objective: Analyze the choice of central tendency statistics based on the shape of the distribution.

122) If all the scores in a distribution are clustered closely together, the distribution has

- a. low variability.
- b. high variability.
- c. a positive skew.
- d. a negative skew.

Answer: a

Page Reference: 65

Skill: Factual

Objective: Know the key terminology of statistics.

123) Conceptually, the standard deviation for a distribution can be thought of as

- a. the centre of the distribution.
- b. the average frequency for each category.
- c. the average distance from the mean.
- d. the distance between the highest and lowest values.

Answer: c

Page Reference: 65–66

Skill: Conceptual

Objective: Know the key terminology of statistics.

124) Standard deviation is a measure of

- a. central tendency.
- b. variability.
- c. statistical significance.
- d. correlation.

Answer: b

Page Reference: 65–66

Skill: Factual

Objective: Know the key terminology of statistics.

125) Ada's professor tells her class that the average score on the last test was 72 points. Ada wants to know if most students actually scored near 72, or if the grades were more spread out, with many students doing much better or worse than a 72. What statistic could Ada ask her professor to calculate to help answer her question?

- a. standard deviation
- b. median
- c. mode
- d. correlation coefficient

Answer: a

Page Reference: 65–66

Skill: Applied

Objective: Know the key terminology of statistics.

126) The term *statistically significant* implies that the results are

- a. important.
- b. reliable.
- c. valid.
- d. not likely due to chance.

Answer: d

Page Reference: 68

Skill: Conceptual

Objective: Understand how and why psychologists use significance tests.

127) Dr. Kwan hypothesizes that allowing factory employees to listen to music while working will improve productivity. After conducting his experiment, Dr. Kwan finds that the group of participants that was allowed to listen to music was more productive than the group that did not, but this difference was not statistically significant. What should Dr. Kwan conclude about the difference between the two groups?

- a. His results support his hypothesis.
- b. He is likely to find the same effect if he replicated the study.
- c. It is possible that the difference was due to random chance.
- d. Music improves productivity in factory settings.

Answer: c

Page Reference: 68–69

Skill: Applied

Objective: Analyze the conclusions that psychologists can make based on significance tests.

128) Researchers use _____ to determine whether the difference between groups is statistically significant.

- a. correlation coefficients
- b. descriptive statistics
- c. hypothesis testing
- d. vector analysis

Answer: c

Page Reference: 68

Skill: Conceptual

Objective: Understand how and why psychologists use significance tests.

129) The _____ assumes that any differences between groups is due to chance.

- a. null hypothesis
- b. p -value
- c. experimental hypothesis

d. central tendency

Answer: a

Page Reference: 68

Skill: Factual

Objective: Understand how and why psychologists use significance tests.

130) A(n) _____ represents the probability that the results from an experiment are due to chance.

- a. hypothesis test
- b. standard deviation
- c. p -value
- d. normal distribution

Answer: c

Page Reference: 68

Skill: Conceptual

Objective: Understand how and why psychologists use significance tests.

131) Dr. Googoo compares the results of experimental and control groups, then calculates the p -value for his results as $p = 0.63$. What is the appropriate conclusion for him to make?

- a. There is likely no difference between his two groups.
- b. There is a statistically significant difference between the two groups.
- c. Dr. Googoo can reject the null hypothesis.
- d. The two groups are strongly correlated.

Answer: a

Page Reference: 68

Skill: Applied

Objective: Understand how and why psychologists use significance tests.

1) A large group of people whom you want to know about is called a

- a. control group.
- b. treatment group.
- c. population.
- d. sample.

Answer: c

Page Reference: 33

2) A psychologist is studying pilot trainees. She picks a select group of trainees that she hopes is representative of all other trainees. The group of trainees being studied by this psychologist is collectively known to researchers as a

- a. sample.
- b. population.
- c. target group.
- d. control group.

Answer: a

Page Reference: 33

3) A subset of cases selected from a larger population is a

- a. control group.
- b. target group.
- c. treatment group.
- d. sample.

Answer: d

Page Reference: 33

4) A scientist is conducting a research study on sleep and learning. She questions her own objectivity and decides to let a third person, who is not associated with conducting the experiment, score the tests. The scientist is probably trying to eliminate

- a. researcher bias.
- b. sample bias.
- c. control bias.
- d. treatment bias.

Answer: a

Page Reference: 34

5) Expectations by the experimenter that might influence the results of an experiment or their interpretation are called

- a. experimental blinds.
- b. researcher bias.
- c. sample bias.
- d. treatment bias.

Answer: b

Page Reference: 34

6) Dr. Welsh is doing experiments using drugs. He is concerned that his subjects will respond to demand characteristics. He may want to control for this by using which of the following strategies?

- a. stratification
- b. two independent variables
- c. a placebo
- d. randomization

Answer: c

Page Reference: 35–36

7) Mr. Marshall hired June to collect data from a group of subjects. Neither June nor the subjects were aware of the independent variable that Mr. Marshall had manipulated. This is an example of

- a. randomization.
- b. a placebo.
- c. double-blind control.
- d. experimenter bias.

Answer: c

Page Reference: 37

8) A "fake treatment" is one way to define a

- a. decoy.

- b. demand characteristic.
- c. control group.
- d. placebo.

Answer: d

Page Reference: 37

9) Researcher bias can best be controlled by using

- a. a placebo.
- b. double-blind control.
- c. randomization.
- d. subjects who do not know the purpose of the study.

Answer: b

Page Reference: 37

10) A research method in which the real-life behaviour of a pre-selected person or a group is studied in depth for some time through the use of observation, interviews, and writings (such as letters) is the _____ method of research.

- a. survey
- b. psychometric
- c. case study
- d. naturalistic observation

Answer: c

Page Reference: 43–44

11) Observing behaviour as it happens in real-life, natural settings without imposing laboratory controls is known as the

- a. naturalistic observation method.
- b. experimental method.
- c. correlational method.
- d. psychometric approach.

Answer: a

Page Reference: 45

12) Naturalistic observation is

- a. recreating natural conditions in the laboratory as closely as possible to make an experiment more valid.
- b. studying behaviour in its natural context.
- c. basically the same process as objective introspection.
- d. observing behaviour in the lab without taking formal notes or using technological equipment to measure the experiment findings.

Answer: b

Page Reference: 45–46

13) Collecting objective data without interference in the subject's normal environment is associated with

- a. survey research.
- b. applied research.
- c. laboratory research.
- d. naturalistic observation.

Answer: d

Page Reference: 45–46

14) As part of an assignment, Bill's class was asked to complete an anonymous questionnaire on prejudice. Which research method was Bill's professor using?

- a. field experiment
- b. survey
- c. naturalistic observation
- d. laboratory experiment

Answer: b

Page Reference: 46

15) Positive correlation shows

- a. the extent to which two independent variables change together.
- b. that as one independent variable increases, another decreases.
- c. that as one variable changes, another changes in the same direction.
- d. that as one variable changes, another changes in the opposite direction.

Answer: c

Page Reference: 47

16) Sasha read about a study in the newspaper that reported a relationship between schizophrenia and crime. What type of research design was most likely used in this study?

- a. naturalistic observation
- b. case study design
- c. correlational design
- d. experimental design

Answer: c

Page Reference: 47

17) A researcher wished to study the relationship between high school grades and post-secondary grades. Of the following research methods, which would be the most appropriate?

- a. case study
- b. correlation
- c. experiment
- d. survey

Answer: b

Page Reference: 47

18) A correlation of .00 means

- a. you made a mistake in calculation.
- b. you did not find out anything about the relationship between the two variables.
- c. the two variables are unrelated.
- d. everyone who scored low on one variable scored high on the other variable, and vice versa.

Answer: c

Page Reference: 47

19) A correlation tells us

- a. whether a cause–effect relationship exists.

- b. whether two variables are related
- c. whether or not a test is efficient.
- d. if people are responding to demand characteristics.

Answer: b

Page Reference: 47

20) A psychologist uses the correlational method to

- a. explain the effects of one variable on another.
- b. compare two groups of subjects.
- c. determine what causes a variable to change.
- d. identify relationships between variables.

Answer: d

Page Reference: 47

21) Which term best describes the correlation between the full moon and violent crime?

- a. positive
- b. negative
- c. zero
- d. illusory

Answer: d

Page Reference: 48

22) In psychological studies, random assignment is used to ensure that

- a. there will be an independent and a dependent variable.
- b. each person has an equal chance of being assigned to each group.
- c. the control group does not know the purpose of the study.
- d. the experimenter won't know who is in each group.

Answer: b

Page Reference: 49

23) Which of the following is a strength of experiments?

- a. They cannot be repeated by anyone other than the experimenter.

- b. They allow for the establishment of cause–effect relationships.
- c. They are not subject to demand characteristics since the subjects do not know they are being observed.
- d. They allow us to draw definitive conclusions about behaviour in the natural environment based on subjects' behaviour in the laboratory.

Answer: b

Page Reference: 49

24) If explanation of the causes of thoughts, feelings, and behaviour is a psychologist's goal, then the _____ method of research should be used.

- a. correlational
- b. experimental
- c. survey
- d. naturalistic observation

Answer: b

Page Reference: 49–50

25) The process of establishing causal relationships is associated most with

- a. naturalistic observation.
- b. experiments.
- c. correlation.
- d. surveys.

Answer: b

Page Reference: 49–50

26) Cause-and-effect conclusions can be drawn from the results of an experiment because

- a. it is almost always performed in a laboratory setting.
- b. statistical analysis can be applied to data from an experiment.
- c. the independent variable is manipulated while other possible causes of change in the dependent variable are held constant.
- d. several groups of subjects, not just one sample, are typically investigated in a laboratory experiment.

Answer: c

Page Reference: 49–50

27) In a test of the effects of sleep deprivation on problem-solving skills, research participants are allowed to sleep either four or eight 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.

Answer: d

Page Reference: 49–50

28) To determine if sugar-rich diets affect hyperactivity in kids, a researcher prepared two daily menus that children would receive for a 30-day period. A high-sugar diet was given to the boys, while the girls had a menu that seemed identical but was not a high-sugar diet. At the end of 30 days, the boys and girls were evaluated to determine their levels of hyperactivity. In the study, the high-sugar diet is the

- a. placebo.
- b. independent variable.
- c. dependent variable.
- d. control group.

Answer: b

Page Reference: 50

29) In an experiment to test the effects of anxiety on performance, the dependent variable is the

- a. amount of anxiety.
- b. age of the person.
- c. person's performance.
- d. cause of the anxiety.

Answer: c

Page Reference: 50

30) In an experiment, a researcher manipulates one variable to see how it affects a second variable. The second variable, which is observed for any possible effects, is called the

- a. dependent variable.
- b. control variable.
- c. independent variable.
- d. hypothetical variable.

Answer: a

Page Reference: 50

31) In a controlled experiment, the group subjected to a change in the independent variable is called the _____ group.

- a. independent
- b. experimental
- c. dependent
- d. control

Answer: b

Page Reference: 50

32) In a controlled experiment, the group *not* subjected to a change in the independent variable, and used for comparison with the group receiving the experimental change, is the _____ group.

- a. independent
- b. experimental
- c. dependent
- d. control

Answer: d

Page Reference: 50

33) In an experiment, a researcher manipulates one variable to see how it affects a second variable. The manipulated variable is called the

- a. dependent variable.
- b. experimental variable.
- c. independent variable.
- d. placebo.

Answer: c

Page Reference: 50

34) A researcher, based on her review of relevant scientific studies, believes that there is a relationship between the frequency of a baby's crying and whether it was nursed at set intervals or on a demand schedule. If this belief were tested by experimentally manipulating feeding schedules, the feeding schedule would be called the

- a. independent variable.
- b. dependent variable.
- c. extraneous variable.
- d. control factors.

Answer: a

Page Reference: 50

35) A researcher, based on her review of relevant scientific studies, believes that there is a relationship between the frequency of a baby's crying and whether it was nursed at set intervals or on a demand schedule. If this belief were tested by experimentally manipulating feeding schedules, frequency of crying would be called the

- a. latent factor.
- b. dependent variable.
- c. independent variable.
- d. control factor.

Answer: b

Page Reference: 50

36) A researcher tests the hypothesis that students who study in the room where they take their tests will perform better on the tests than students who study in other rooms. She requires one group to study in the classroom where the exam is given and another group to study in the library. All students take the test in the classroom, and their test performance is compared. In this example, the location that students study is the

- a. independent variable.
- b. dependent variable.
- c. manipulation.
- d. hypothesis.

Answer: a

Page Reference: 50

37) Professor McSpell designed an experiment to test her hypothesis that exercise will increase spelling ability. She divided children into three groups and had one group do 10 minutes of exercises, one group do 30 minutes of exercises, and the third group do no exercise. She then tested all three groups of children to see how many words they could spell correctly on a spelling test. In this experiment, the scores on the spelling test serve as the

- a. dependent variable.
- b. independent variable.
- c. control group.
- d. reliability measure.

Answer: a

Page Reference: 50

38) In an experiment, the "measurable aspect of the behaviour of the subject" is called the _____ variable.

- a. dependent
- b. focal
- c. independent
- d. control

Answer: a

Page Reference: 50

39) The purpose of an experiment is to discover whether there is a relationship between the _____ and the _____.

- a. independent variable; control variable
- b. dependent variable; control variable
- c. control group; experimental group
- d. independent variable; dependent variable

Answer: d

Page Reference: 50

40) In an experiment on the effects of level of motivation on the performance of typists, the researcher randomly assigned one-third of her subjects to each of three levels of motivation (and then induced different levels of motivation in the three groups). She measured the average words typed per minute by each group, and found that performance

was highest under medium motivation, average under low motivation, and worst under high motivation. What was the independent variable in this experiment?

- a. motivation
- b. typing speed
- c. variation in typing speed
- d. manipulation of typing speed

Answer: a

Page Reference: 50

41) A psychologist wanted to see if people were more prone to seek the company of others when anxious than when calm. He randomly assigned half of his subjects to an anxiety group and then told them that, as part of the study, they would receive electric shocks. He did not frighten the other group of subjects. Finally, he recorded how many subjects in each group chose to be "tested" in a group setting and how many chose to be "tested" alone. What was the independent variable in this study?

- a. tendency to desire the company of others
- b. level of shock
- c. level of anxiety
- d. the anxious group

Answer: c

Page Reference: 50

42) In an experiment, four groups of college students used different memorizing strategies to learn the material in one chapter of a textbook. Then each group was given the same multiple-choice test on the material. What was the dependent variable in this study?

- a. the students' performance on the test
- b. the four different groups
- c. the four different memorizing strategies
- d. manipulation of memorizing strategies

Answer: a

Page Reference: 50

43) A psychologist wanted to see if people were more prone to seek the company of others when anxious than when calm. He randomly assigned half of his subjects to an anxiety group and then told them that, as part of the study, they would receive electric

shocks. He did not frighten the other group of subjects. Finally, he recorded how many subjects in each group chose to be "tested" in a group setting and how many chose to be "tested" alone. What was the dependent variable in this study?

- a. the two groups
- b. the level of anxiety
- c. preference for being alone or in a group
- d. manipulation of anxiety

Answer: c

Page Reference: 50

44) A psychologist wanted to see if people were more prone to seek the company of others when anxious than when calm. He randomly assigned half of his subjects to an anxiety group and then told them that, as part of the study, they would receive electric shocks. He did not frighten the other group of subjects. Finally, he recorded how many subjects in each group chose to be "tested" in a group setting and how many chose to be "tested" alone. In this study, the group that was *not* frightened would be called the _____ group.

- a. experimental
- b. control
- c. placebo
- d. test

Answer: b

Page Reference: 50

45) The purpose of a control group in an experiment is to

- a. serve as a check on the interpretation of results.
- b. increase the ability to generalize the findings.
- c. manipulate the dependent variable.
- d. represent the general, nonlaboratory population.

Answer: a

Page Reference: 50

46) In an experiment concerning the effect of auditory feedback on accuracy in writing computer programs, one group hears a computer-simulated voice say each character or symbol that they type in as they are writing their programs. The second group does not

receive the auditory feedback as they type their program code. This second group is the _____ group.

- a. experimental
- b. control
- c. placebo
- d. confederate

Answer: b

Page Reference: 50

47) Why is it essential that the experimental and control groups be treated identically in every respect but one?

- a. so that the dependent variable can be accurately measured
- b. so that the results will apply outside the laboratory setting
- c. so that if the behaviour of the two groups differs, the difference can be credited to the one thing that distinguished the groups from one another
- d. so that if the behaviour of the two groups differs, that difference can be used to establish a functional relationship between the independent and dependent variables

Answer: d

Page Reference: 50

48) In an experiment, group A was given 3 minutes to study a word list, while group B was given 10 minutes to study the same list. Later, both groups were asked to recall words from the list. In this study, the number of words recalled was the

- a. independent variable.
- b. dependent variable.
- c. placebo.
- d. control group.

Answer: b

Page Reference: 50

49) To obtain objective information, researchers sometimes must deceive their subjects. Ethically, researchers using deception must always

- a. pay participants.
- b. maintain subject anonymity.

- c. use double-blind control.
- d. explain the deception to the subjects after the data are collected and obtain their informed consent to use the information obtained.

Answer: d

Page Reference: 55–56

50) Under which circumstance is the use of deception justified by ethics review boards?

- a. when the study could not have been conducted without deception
- b. when the research involves a medical or therapeutic intervention
- c. when participants might not agree to participate unless deception is used
- d. when the placebo effect is likely to occur

Answer: a

Page Reference: 55–56

51) When plotting data, Dr. Ryeburn notes that the distribution has an elongated tail to the right. Which descriptive statistic would offer the best measure of central tendency in this case?

- a. mean
- b. median
- c. standard deviation
- d. range

Answer: b

Page Reference: 63

1) Good scientific research is based on measurements that are objective, valid, and reliable.

- a. True
- b. False

Answer: a

Page Reference: 31

2) If someone takes an intelligence test several times and receives the same score, the test is considered to have high validity.

- a. True
- b. False

Answer: b

Page Reference: 32–33

3) Using random sampling increases the likelihood that the results from a sample will generalize to the population.

- a. True
- b. False

Answer: a

Page Reference: 33

4) In a double-blind experiment, neither the participant nor the researcher knows which treatment group the participant is in.

- a. True
- b. False

Answer: a

Page Reference: 37

5) Once the results of a study have been peer reviewed and published, they are considered accurate, even if other researchers cannot replicate them.

- a. True
- b. False

Answer: b

Page Reference: 38

6) Surveys and questionnaires are used to collect self-report data.

- a. True

b. False

Answer: a

Page Reference: 46

7) A correlation coefficient of $-.80$ represents a stronger relationship than a correlation coefficient of $+.50$.

a. True

b. False

Answer: a

Page Reference: 47

8) If researchers find that the number of books read by fifth-grade students is positively correlated with their scores on an intelligence test, it would be correct to conclude that having children read more increases their intelligence.

a. True

b. False

Answer: b

Page Reference: 47–48

9) Emmerson designs an experiment to test whether drinking a protein shake after weightlifting increases muscle development. The independent variable in Emmerson's experiment is the protein shake.

a. True

b. False

Answer: a

Page Reference: 50

10) Asking participants to write about upsetting or traumatic experiences can put them at risk for cognitive and emotional stress. However, there might also be potential benefits of coping through expression. Research ethics boards (REB) weigh the risks and benefits of research.

a. True

b. False

Answer: a

Page Reference: 54–55

11) Researchers are NOT allowed to deceive participants about the purpose of a study.

- a. True
- b. False

Answer: b

Page Reference: 55–56

12) The right to give informed consent stays with a volunteer throughout the entire study, and they should be able to withdraw at any point.

- a. True
- b. False

Answer: a

Page Reference: 55–56

13) Researchers must give participants total anonymity.

- a. True
- b. False

Answer: b

Page Reference: 56

14) For security and confidentiality reasons, once the results of a study are reported in a journal or at a conference, the data should be destroyed.

- a. True
- b. False

Answer: b

Page Reference: 59–60

15) A negatively skewed distribution has a long tail on the right of the cluster.

- a. True
- b. False

Answer: b

Page Reference: 63

16) The mean, median, and mode are all measures of central tendency.

- a. True
- b. False

Answer: a

Page Reference: 63–64

17) When a distribution is skewed, the median is a better measure of the "average" than the mean.

- a. True
- b. False

Answer: a

Page Reference: 63–65

18) If the distribution of quiz scores for a class has high variability, most of the students scored within a few points of each other.

- a. True
- b. False

Answer: b

Page Reference: 63–65

19) If researchers find a statistically significant result, they would be likely to find the same result if they replicated the study again.

- a. True
- b. False

Answer: a

Page Reference: 68

20) If researchers calculate a large standard deviation, it indicates that there is a low level of variability in the data.

- a. True
- b. False

Answer: b

Page Reference: 65