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

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

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

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.

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