MULTIPLE CHOICE

1. Which of the following is an example of being a producer of research?
   a. Administering an anxiety questionnaire
   b. Applying a new therapy technique
   c. Writing an opinion article about a psychological study
   d. Undergoing a brain scan

   ANS: A       DIF: Medium
   REF: Research Producers, Research Consumers: Why the Producer Role Is Important
   OBJ: Learning Objective 1       MSC: Applying

2. Which of the following is NOT an example of being a producer of research?
   a. Administering a questionnaire of PTSD symptoms
   b. Observing the behavior of rats who have been socially isolated
   c. Attending a psychological conference
   d. Measuring dopamine levels in patients with schizophrenia

   ANS: C       DIF: Medium
   REF: Research Producers, Research Consumers: Why the Producer Role Is Important
   OBJ: Learning Objective 1       MSC: Applying

3. Students who are interested in being consumers of but not producers of research might choose all of the following professions EXCEPT:
   a. An FBI agent
   b. A guidance counselor
   c. A political pollster
   d. An advertising executive

   ANS: C       DIF: Medium
   REF: Research Producers, Research Consumers: Why the Producer Role Is Important
   OBJ: Learning Objective 1       MSC: Applying

4. Dr. Smitherman insists that all his research assistants know how to be producers of research. All of the following relate to this requirement EXCEPT:
   a. He wants to make sure they understand how to write in APA style
   b. He wants to make sure they understand why anonymity is important
   c. He wants to make sure they understand how to interpret study results and graphs
   d. He wants to make sure they have previously been participants in research studies

   ANS: D       DIF: Medium
   REF: Research Producers, Research Consumers: Why the Consumer Role Is Important
   OBJ: Learning Objective 1       MSC: Understanding

5. Elliott is double majoring in English and psychology. He plans on being a high school English teacher and is only majoring in psychology because he finds the classes interesting. All of the following are important reasons for him to be a good consumer of research EXCEPT:
   a. He will likely be asked to read research studies in his future psychology classes
   b. He will likely encounter research studies described in popular magazines he reads
   c. He will likely need to read research related to enhancing his teaching
   d. He will likely need to be a producer of researcher as well

   ANS: D       DIF: Easy
   REF: Research Producers, Research Consumers: Why the Consumer Role Is Important
6. Which of the following people will likely NOT find it important to be a consumer of psychological research professionally?
   a. High school teachers
   b. Gardeners
   c. Human resource managers
   d. Sales representatives

   ANS: B  DIF: Easy
   REF: Research Producers, Research Consumers: Why the Consumer Role Is Important

7. In the theory-data cycle, theories first lead to ________.
   a. Questions
   b. Answers
   c. Data
   d. Research

   ANS: A  DIF: Easy
   REF: How Scientists Approach Their Work: Scientists Test Theories: The Theory-Data Cycle

8. Another word for hypothesis is a/an ________.
   a. Theory
   b. Observation
   c. Prediction
   d. Outcome

   ANS: C  DIF: Easy
   REF: How Scientists Approach Their Work: Scientists Test Theories: The Theory-Data Cycle

9. Another word for data is a/an ________.
   a. Theory
   b. Observation
   c. Prediction
   d. Outcome

   ANS: B  DIF: Easy
   REF: How Scientists Approach Their Work: Scientists Test Theories: The Theory-Data Cycle

RESEARCH STUDY 1.1

Deci and Ryan (1985, 2001) have proposed that there are three fundamental needs that are required for human growth and fulfillment: relatedness, autonomy, and competence. Susan predicts that students who have these needs met in their psychology class feel happier and more satisfied with the class. She collects data and finds that students who feel more related and competent do feel happier but that feeling more autonomous does not seem to matter. Susan thinks that maybe autonomy is only necessary when people are in situations in which they are not being evaluated.

Refer to Research Study 1.1 to answer the following four questions.

10. Deci and Ryan’s general statement of how the three needs are related to growth and fulfillment is an example of which of the following?
   a. A theory
   b. A hypothesis
   c. Data
   d. Research

   ANS: A  DIF: Difficult
   REF: How Scientists Approach Their Work: Scientists Test Theories: The Theory-Data Cycle
11. Susan’s prediction that students who have all three needs met will experience greater satisfaction with their psychology class is an example of which of the following?
   a. A theory        c. Data
   b. A hypothesis     d. Research

   ANS: B        DIF: Difficult
   REF: How Scientists Approach Their Work: Scientists Test Theories: The Theory-Data Cycle
   OBJ: Learning Objective 2        MSC: Applying

12. After Susan collects and analyzes her data, which of the following is the next logical step?
   a. Writing a paper challenging Self-Determination Theory, because only some of her data supported it
   b. Ignoring the data that did not fit the theory
   c. Recalculating her data to fit the theory
   d. Altering or amending the theory to fit her data

   ANS: D        DIF: Difficult
   REF: How Scientists Approach Their Work: Scientists Test Theories: The Theory-Data Cycle
   OBJ: Learning Objective 2        MSC: Applying

13. Susan’s hypothesis was not completely supported by her data. What does this mean?
   a. Susan must have collected the data incorrectly.
   b. Susan must have analyzed the data incorrectly.
   c. The theory may need to be amended.
   d. The theory is completely wrong.

   ANS: C        DIF: Difficult
   REF: How Scientists Approach Their Work: Scientists Test Theories: The Theory-Data Cycle
   OBJ: Learning Objective 2        MSC: Applying

14. _______ is the approach of collecting data and using it to develop, support, and/or challenge a theory.
   a. Falsifiability        c. Empiricism
   b. Theorizing        d. Application

   ANS: C        DIF: Easy
   REF: How Scientists Approach Their Work: Scientists Test Theories: The Theory-Data Cycle
   OBJ: Learning Objective 2        MSC: Remembering

15. Occam’s razor states that the simplest solution is the best, all things being equal. This speaks to a theory’s:
   a. Parsimony        c. Theorizing
   b. Falsifiability        d. Empiricism

   ANS: A        DIF: Easy
   REF: How Scientists Approach Their Work: Scientists Test Theories: The Theory-Data Cycle
   OBJ: Learning Objective 2        MSC: Applying

16. Benjamin is a social psychologist who studies marriage. He believes that marital satisfaction has two components: the ability to trust one’s partner and a belief that one can be a good spouse. This is known as:
   a. A theory        c. Data
   b. A hypothesis     d. Research

   ANS: A        DIF: Medium
   REF: How Scientists Approach Their Work: Scientists Test Theories: The Theory-Data Cycle
17. Benjamin is a social psychologist who studies marriage. He believes that marital satisfaction has two components: the ability to trust one’s partner and a belief that one can be a good spouse. He conducts a study to test his ideas. Assuming that his data match his theory, which of the following statements should he make?
   a. “The data prove my theory.”
   b. “My theory is generalizable.”
   c. “The data provide support for my theory.”
   d. “The data complicate my theory.”

ANS: C  DIF: Medium
REF: How Scientists Approach Their Work: Scientists Test Theories: The Theory-Data Cycle

OBJ: Learning Objective 2  MSC: Applying

18. Which of the following is true of the relationship between hypotheses and theories?
   a. Hypotheses used to determine if a theory is accurate.
   b. Theories are used to determine if a hypothesis is accurate.
   c. Multiple theories are needed to test whether a hypothesis is accurate.
   d. Hypotheses and theories are synonymous terms.

ANS: A  DIF: Difficult
REF: How Scientists Approach Their Work: Scientists Test Theories: The Theory-Data Cycle

OBJ: Learning Objective 2  MSC: Analyzing

19. Both James and Thomas have theories that explain why listening to classical music while reading is associated with increased recall of the material. James’ theory is much simpler than Thomas’. Thomas created his theory a few months before James did. Which of the following is true?
   a. James’ theory would be considered better because it is more parsimonious.
   b. James’ theory would be considered better because it was thought of more recently.
   c. Thomas’ theory would be considered better because he thought of it first.
   d. Thomas’ theory would be considered better because it is more complex.

ANS: A  DIF: Medium
REF: How Scientists Approach Their Work: Scientists Test Theories: The Theory-Data Cycle

OBJ: Learning Objective 2  MSC: Analyzing

20. Which of the following is an example of applied research?
   a. A social psychologist who is interested in the components of self-concept
   b. An educational psychologist who looks for a way to increase math skills in 8-year-olds
   c. A personality psychologist who studies the difference between introverts and extroverts
   d. A cognitive psychologist who looks at the difference in problem-solving abilities of men and women

ANS: B  DIF: Medium
REF: How Scientists Approach Their Work: Scientists Tackle Applied and Basic Problems

OBJ: Learning Objective 3  MSC: Applying

21. Which of the following is NOT an example of applied research?
   a. An industrial-organizational psychologist who is interested in the components of job satisfaction
   b. A clinical psychologist who examines the effectiveness of art therapy in decreasing symptoms of ADHD
   c. A sports psychologist who examines how mindset (“train well” versus “win”) affects athletic performance

ANS: a
22. Which of the following is an example of basic research?
   a. An industrial-organizational psychologist who is interested in the components of job commitment
   b. A clinical psychologist who examines the effectiveness of drama therapy in helping children who have been abused
   c. An educational psychologist who examines how mindset (“intelligence is innate” or “intelligence can be achieved”) affects academic performance
   d. An experimental psychologist who examines people’s ability to perceive a “sweet” taste
   ANS: D  DIF: Medium
   REF: How Scientists Approach Their Work: Scientists Tackle Applied and Basic Problems
   OBJ: Learning Objective 3  MSC: Applying

23. Research that is done specifically to solve a practical problem, like increasing memory ability or decreasing symptoms of depression, is known as:
   a. Basic research  c. Empirical research
   b. Applied research  d. Translational research
   ANS: B  DIF: Easy
   REF: How Scientists Approach Their Work: Scientists Tackle Applied and Basic Problems
   OBJ: Learning Objective 3  MSC: Remembering

24. Research that is done specifically to add to our general understanding of psychology, like distinguishing the components of extraversion or predicting the time it takes a person to determine whether an object is a face or another object, is known as:
   a. Basic research  c. Empirical research
   b. Applied research  d. Translational research
   ANS: A  DIF: Easy
   REF: How Scientists Approach Their Work: Scientists Tackle Applied and Basic Problems
   OBJ: Learning Objective 3  MSC: Remembering

25. Which of the following is true of the difference between basic and applied research?
   a. Basic and applied research have different goals.
   b. Applied research is more important than basic research.
   c. Basic research is more difficult to conduct than applied research.
   d. Applied research is done by consumers of research.
   ANS: A  DIF: Difficult
   REF: How Scientists Approach Their Work: Scientists Tackle Applied and Basic Problems
   OBJ: Learning Objective 3  MSC: Analyzing

26. Vinai learns that people with schizophrenia have a problem labeling their emotions. Using this information, he designs a research study to examine whether teaching patients with schizophrenia to label the emotions of people they see in movie clips helps them to better label their own emotions. Vinai hopes that the findings of this research could then be used to create an intervention used in the treatment of schizophrenia. Vinai’s study is an example of:
   a. Basic research  c. Empirical research
b. Applied research
d. Translational research

ANS: D  DIF: Medium
REF: How Scientists Approach Their Work: Scientists Tackle Applied and Basic Problems
OBJ: Learning Objective 3  MSC: Applying

27. According to the text, the bridge between basic and applied research is known as:
a. Empirical research  c. Translational research
b. Practical research  d. Compound research

ANS: C  DIF: Easy
REF: How Scientists Approach Their Work: Scientists Tackle Applied and Basic Problems
OBJ: Learning Objective 3  MSC: Remembering

28. Journals and magazines are similar in all the following ways EXCEPT:
a. Both tend to have articles written by several different contributors.
b. Both tend to be released monthly or quarterly.
c. Both tend to publish peer-reviewed articles.
d. Both are trying to inform their readers.

ANS: C  DIF: Easy
REF: How Scientists Approach Their Work: Scientists Make It Public: The Publication Process
OBJ: Learning Objective 4  MSC: Analyzing

29. Which of the following is the reason that scientific journals use peer review?
a. It is cost effective.
b. It is more efficient/faster.
c. It encourages collaboration among researchers.
d. It ensures that the studies published are of the highest quality.

ANS: D  DIF: Medium
REF: How Scientists Approach Their Work: Scientists Make It Public: The Publication Process
OBJ: Learning Objective 4  MSC: Remembering

30. Nadia submits her article to a scientific journal for publication. Who makes the final decision on whether an article is published in that scientific journal?
a. The editor of the journal  c. A panel of experts
b. Nadia, the author of the article  d. The publisher of the journal

ANS: A  DIF: Difficult
REF: How Scientists Approach Their Work: Scientists Make It Public: The Publication Process
OBJ: Learning Objective 4  MSC: Remembering

31. Which aspect of the peer-review cycle allows for the greatest amount of honesty in reviews?
a. The number of peer reviewers  c. The possibility of rejection
b. The anonymity of the peer reviewers  d. The frequency of publication

ANS: B  DIF: Difficult
REF: How Scientists Approach Their Work: Scientists Make It Public: The Publication Process
OBJ: Learning Objective 4  MSC: Remembering

32. Dr. Gonzalez is a peer reviewer for a manuscript submitted to a journal. He is likely to provide comments on all of the following EXCEPT:
a. How interesting the research is  c. The prestige/reputation of the author
b. How well the research was conducted  d. How important the results are
33. Dr. Stewart is an editor of a psychology journal. She wants to ensure that reviewers give honest reviews of the papers they are asked to read. Which of the following could she do to increase the likelihood of honest feedback?
   a. Increase the number of peer reviewers
   b. Use reviewers from fields other than psychology
   c. Make sure the identity of peer reviewers is unknown
   d. Give reviewers a longer amount of time to read papers

   ANS: C  DIF: Medium

34. Articles that could be considered journalism:
   a. Are typically written by scientists
   b. Are typically written for scientists
   c. Are hard to access
   d. Do not require specialized education to read

   ANS: D  DIF: Easy

35. The quality of journalists’ coverage of a science story will be determined by two factors:
   a. The importance and accuracy of the story
   b. The length and source of the story
   c. The education and experience of the journalist
   d. The education and experience of the scientist

   ANS: A  DIF: Easy

36. Salma conducts a study and finds that her data do not completely support her theory. Which of the following statements should she avoid saying?
   a. “My data is inconsistent with my theory.”
   b. “My data disproves my theory.”
   c. “My theory needs amending.”
   d. “I may need to collect more data.”

   ANS: B  DIF: Difficult

37. Translational research is best thought of as _______ basic research and applied research.
   a. Superior to both
   b. Inferior to both
   c. A bridge between
   d. Another word for

   ANS: C  DIF: Medium
38. All of the following are reasons psychological scientists publish their research EXCEPT:
   a. To get money from the journals where their work appears
   b. To share interesting findings
   c. To have their results reviewed by other psychologists
   d. To provide evidence for a theory

   ANS: A  DIF: Medium
   REF: How Scientists Approach Their Work: Scientists Make It Public: The Publication Process
   OBJ: Learning Objective 4  MSC: Understanding

39. All of the following are reasons that a journalist may misrepresent a psychology study in a magazine EXCEPT:
   a. Journalists are working under strict publication deadlines
   b. Journalists may oversimplify the study for their readers
   c. Journalists may not personally have the scientific background to understand the study
   d. Journalists are unethical

   ANS: D  DIF: Medium
   REF: How Scientists Approach Their Work: Scientists Talk to the World: From Journal to Journalism
   OBJ: Learning Objective 6  MSC: Understanding

40. Your friend Gaby loves reading articles about psychology studies in her monthly women’s magazine. Which of the following would you tell her?
   a. Stop reading those articles because they are never accurate.
   b. Peer-reviewed journals are much easier to read than magazines.
   c. Be careful about reading those articles because they may not present accurate findings.
   d. Reading those magazines is just as good as reading the peer-reviewed journals.

   ANS: C  DIF: Difficult
   REF: How Scientists Approach Their Work: Scientists Talk to the World: From Journal to Journalism
   OBJ: Learning Objective 6  MSC: Understanding

SHORT ANSWER

1. Name three types of research data or information that people are exposed to every day, even if they are not psychologists.

   ANS:
   Several answers are acceptable, including political polling data, websites (e.g., WebMD), advice columns in newspapers and magazines.

   DIF: Easy
   REF: Research Producers, Research Consumers: Why the Consumer Role Is Important
   OBJ: Learning Objective 1  MSC: Understanding

2. Provide two reasons why it is beneficial to be a good consumer of research, even if you are not a psychologist.

   ANS:
   Several answers are acceptable, including using findings from research to help one’s profession, to help one’s everyday life (e.g., techniques to improve relationships, improve study skills), to save money and time (e.g., by not spending time and money on things that are not effective).

   DIF: Easy
3. Although not all psychology majors become producers of research, name two benefits of learning how to become a producer of research.

ANS: Several answers are acceptable, including learning to write in APA style, gaining skills necessary to work in a professor’s research lab, gaining skills necessary to complete a class assignment, and becoming a more informed consumer.

DIF: Easy

4. Paul wakes up on Tuesday morning and none of the lights or the appliances in his apartment are working. What theory might explain why this is happening? What could Paul do to test your theory? How is this an example of the theory-data cycle in science?

ANS: Students should propose a theory for why the lights/appliances do not work. Possible theories could be that Paul did not pay his electric bill, there was an electrical storm, or a fuse to his apartment was blown. Students should then propose a way for Paul to test the theory. For example, if students theorize that the lights/appliances are off because he did not pay the bill, they should state that he should pay his bill and see if the lights come back on. Students should then explain how Paul has a theory, then collects data, and then uses the data to evaluate the theory.

DIF: Difficult

5. What is the difference between a theory and a hypothesis?

ANS: Students should state that a hypothesis is a prediction about what a researcher says should happen. Students may say that a hypothesis is an if-then statement, such that if something happens, then they predict something else will then happen. Students should say that a theory is a statement that explains why various variables/concepts are related. Some students may say that hypotheses are used to test theories.

DIF: Medium

6. What are the three components of a good theory?

ANS: Students should state the three components (falsifiable, supported by data, and parsimonious).

DIF: Easy
7. Explain why we do not say that a single study proves a theory or that a single study disproves a theory.

ANS:
Students should mention that a single study does not prove a theory because although a study today may find support for a theory, a study done tomorrow may not find support for that theory. Students should also mention that a single study cannot disprove a theory because the single study may have been poorly conducted. Further, students may also mention that a disconfirming study may mean that the theory may need to be amended or altered, rather than completely dismissed.

DIF: Medium
REF: How Scientists Approach Their Work: Scientists Test Theories: The Theory-Data Cycle
OBJ: Learning Objective 5    MSC: Understanding

8. Explain why the relationship between applied and basic research can best be thought of as interrelated.

ANS:
Students should mention that these two types of research are best thought of as interrelated because they both inform each other. Specifically, basic research can be later used to conduct applied research and inform basic research. Students may also mention translational research.

DIF: Difficult
REF: How Scientists Approach Their Work: Scientists Tackle Applied and Basic Problems
OBJ: Learning Objective 3    MSC: Understanding

9. The Harlow study described in the text is an example of basic research. It found that attachment to a caregiver is important in the early months of life. How might a researcher use this study as inspiration for an applied research study?

ANS:
Students should provide an example applying the concept of attachment in early life to an applied domain. For example, a student could include studying foster children who may not be with their caregivers in early life and their later attachment. Another example could involve examining different techniques used in hospitals to teach parents-to-be how to form close attachments with their children.

DIF: Difficult
REF: How Scientists Approach Their Work: Scientists Tackle Applied and Basic Problems
OBJ: Learning Objective 3    MSC: Applying

10. Imagine that you are a clinical researcher who studies depression. Provide an example of basic research and applied research that you might conduct.

ANS:
Students should provide an example of a basic study—frequency of depressive symptoms, type of depressive symptoms, how people who have depression function in daily life, and so on. Students should also provide an example of an applied study—a treatment designed to decrease depressive symptoms, a method to increase the social interactions of depressive patients, and so on.

DIF: Difficult
REF: How Scientists Approach Their Work: Scientists Tackle Applied and Basic Problems
OBJ: Learning Objective 3    MSC: Applying
11. Name three ways that articles published in scientific journals are different from journalistic articles.

ANS: Students should mention any three of the following: peer-reviewed articles are written by scientists (journalism articles are not), are written for other scientists (journalism articles are not), are harder to access/acquire (journalism articles are not), require special education to read (journalism articles do not), are peer-reviewed (journalism articles are not).

DIF: Medium
REF: How Scientists Approach Their Work: Scientists Tackle Applied and Basic Problems
OBJ: Learning Objective 6
MSC: Understanding

12. Explain how the peer-review process ensures that only quality science is published.

ANS: Students should say that peer reviewers act as gatekeepers or monitors of quality science by evaluating research that is submitted and ensuring that only good research is published. They may also state that peer reviewers comment on what is good and what is bad about the research and provide suggestions for improving the research before it is published.

DIF: Medium
REF: How Scientists Approach Their Work: Scientists Make It Public: The Publication Process
OBJ: Learning Objective 4
MSC: Understanding

13. Dr. Mendoza sends a paper to a journal. The editor sends the paper to four experts in the field for peer review. Name three things that the peer reviewers should comment on in evaluating Dr. Mendoza’s paper.

ANS: Students should state that the peer reviewers should comment on three of the following: (a) how interesting the work is, (b) how novel the research is, (c) how well the research was done, and (d) how clear the results are.

DIF: Medium
REF: How Scientists Approach Their Work: Scientists Make It Public: The Publication Process
OBJ: Learning Objective 4
MSC: Applying

14. Name the two aspects that improve the publication process from journal to journalism.

ANS: Students should mention that journalists should choose studies that are important (and not just eye-catching or sensational) and that they should accurately report on/describe the research study, ensuring that they fairly describe the study.

DIF: Easy
REF: How Scientists Approach Their Work: Scientists Talk to the World: From Journal to Journalism
OBJ: Learning Objective 6
MSC: Understanding

15. The text mentions two important questions to ask about a popular press story. What are these two questions and why are they important to consider as you evaluate a story?

ANS:
Students should state that they should ask, “Is the story important?” and “Is the story accurate?” The first question is important to consider because some popular press stories only report on stories that are sensational or eye-catching rather than those that are really adding to our understanding of science. The second question is important to ask because the journalist might have omitted details or aspects of the study that are key to understanding the study.

DIF: Easy
REF: How Scientists Approach Their Work: Scientists Talk to the World: From Journal to Journalism
OBJ: Learning Objective 6
MSC: Understanding