Chapter 1: Science and the Research Process

Test Bank

# Multiple Choice

1. Knowledge with a focus on assessment is referred to as \_\_\_\_\_\_.

A. predictive

B. improvement

C. descriptive

D. explanatory

Ans: C

Cognitive Domain: Knowledge

Answer Location: Definitions of Science and Research

Difficulty Level: Easy

2. Knowledge with a focus on identified outcomes is referred to as \_\_\_\_\_\_.

A. predictive

B. improvement

C. descriptive

D. explanatory

Ans: A

Cognitive Domain: Knowledge

Answer Location: Definitions of Science and Research

Difficulty Level: Easy

3. Knowledge designed to determine the effectiveness of interventions is referred to as \_\_\_\_\_\_.

A. predictive

B. improvement

C. descriptive

D. explanatory

Ans: B

Cognitive Domain: Knowledge

Answer Location: Definitions of Science and Research

Difficulty Level: Easy

4. What type of research knowledge may be the broadest of all and subsumes all the others?

A. predictive

B. improvement

C. descriptive

D. explanatory

Ans: D

Cognitive Domain: Knowledge

Answer Location: Definitions of Science and Research

Difficulty Level: Easy

5. Most recently, counseling and psychology influenced by medicine has introduced the use of \_\_\_\_\_\_.

A. managed care practices

B. solution-focused practices

C. evidenced-based practices

D. practice-based evidence

Ans: C

Cognitive Domain: Knowledge

Answer Location: Relevance of Using and Applying Skills in Evaluating Research

Difficulty Level: Easy

6. Science has two primary functions according to \_\_\_\_\_\_ and \_\_\_\_\_\_.

A. Babbie; Salkind

B. Best; Kahn

C. Montcalm; Royce

D. Moore; Kahn

Ans: B

Cognitive Domain: Knowledge

Answer Location: Definitions of Science and Research

Difficulty Level: Easy

7. The ultimate goal of science and research is \_\_\_\_\_\_.

A. to obtain knowledge that is useful in understanding how our world operates

B. to understand validity and reliability issues

C. to understand the concept of variables

D. to learn how to develop charts and graphs

Ans: A

Cognitive Domain: Knowledge

Answer Location: Definitions of Science and Research

Difficulty Level: Easy

8. Salkind (2006) argues that \_\_\_\_\_\_ is one of the key elements in conducting quality research.

A. subjectivity

B. political ideology

C. objectivity

D. relevance

Ans: C

Cognitive Domain: Knowledge

Answer Location: Definitions of Science and Research

Difficulty Level: Easy

9. Babbie (2001) argues that there are \_\_\_\_\_\_ types of errors that occur in research inquiry.

A. six

B. nine

C. seven

D. four

Ans: D

Cognitive Domain: Knowledge

Answer Location: Definitions of Science and Research

Difficulty Level: Easy

10. A researcher makes a conclusion that is based more on their own theory versus what is actually observed in the data collected. This error is called \_\_\_\_\_\_.

A. error of selective observation

B. error of overgeneralization

C. inaccurate observation

D. illogical reasoning

Ans: A

Cognitive Domain: Application

Answer Location: Definitions of Science and Research

Difficulty Level: Medium

11. The Scientist–Practitioner model of research requires prioritizing the relevance and importance of research in \_\_\_\_\_\_.

A. practice

B. research

C. interests

D. both practice and research

Ans: D

Cognitive Domain: Comprehension

Answer Location: Practitioner–Scientist

Difficulty Level: Medium

12. The basic concept of the Scientist–Practitioner model is that those practicing the professions of psychology and counseling would split their time and focus \_\_\_\_\_\_ between research and practice.

A. 20/80

B. 60/40

C. 50/50

D. 30/70

Ans: C

Cognitive Domain: Knowledge

Answer Location: Practitioner–Scientist

Difficulty Level: Easy

13. According to Manicas and Secord (1983), scientists practice by creating at least a partially \_\_\_\_\_\_ system.

A. open

B. closed

C. permeable

D. split

Ans: B

Cognitive Domain: Knowledge

Answer Location: Practitioner–Scientist

Difficulty Level: Easy

14. Rick Houser argues the realities of how many master’s-level-trained counselors tend to emphasize a \_\_\_\_\_\_ first approach when utilizing research.

A. science

B. practice

C. reality

D. objective

Ans: B

Cognitive Domain: Knowledge

Answer Location: Practitioner–Scientist

Difficulty Level: Easy

15. Lawfulness in counseling and education is determined by \_\_\_\_\_\_.

A. the extent to which we can find ways to predict and control events

B. the laws of nature being understandable

C. what is right and good in all situations

D. scientific realism

Ans: A

Cognitive Domain: Knowledge

Answer Location: Assumptions About Science and Research

Difficulty Level: Easy

16. One of the first steps in using and conducting research is \_\_\_\_\_\_.

A. evaluating sources

B. citing sources

C. choosing a search engine

D. clarifying a topic and picking search terms

Ans: D

Cognitive Domain: Comprehension

Answer Location: Obtaining Information From Electronic Databases and Articles in Journals

Difficulty Level: Easy

17. Higher quality articles are \_\_\_\_\_\_ reviewed, meaning that a publication in a journal has been critiqued by professionals in the field before publication or acceptance.

A. professionally

B. peer

C. extensively

D. none of these

Ans: B

Cognitive Domain: Knowledge

Answer Location: Obtaining Information From Electronic Databases and Articles in Journals

Difficulty Level: Easy

18. Obtaining information on the Internet outside of professional journals can be dangerous for all of the following reasons, EXCEPT \_\_\_\_\_\_.

A. lack of systematic evaluation

B. varying accuracy

C. possible credibility issues

D. author of Internet content can be found directly

Ans: D

Cognitive Domain: Comprehension

Answer Location: Obtaining Information From Electronic Databases and Articles in Journals

Difficulty Level: Easy

19. All of the following are examples of plagiarism: \_\_\_\_\_\_.

A. submitting another’s work as your own

B. stating others’ work as your own without noting the source or giving credit

C. not placing quotation marks around a direct quote or giving incorrect information

D. changing words but using the same sentence structure

E. all of these are examples of plagiarism

Ans: E

Cognitive Domain: Knowledge

Answer Location: Obtaining Information From Electronic Databases and Articles in Journals

Difficulty Level: Easy

20. Cybercheating refers to \_\_\_\_\_\_.

A. not using a firewall when doing research

B. copying off another student in class

C. taking another’s work from the web and copying and pasting it into your paper

D. not using citations in your research paper

Ans: C

Cognitive Domain: Knowledge

Answer Location: Obtaining Information From Electronic Databases and Articles in Journals

Difficulty Level: Easy

# True/False

1. Science and scientific advances have never been purported to be critical in promoting the well-being of individuals and in societal functioning.

Ans: F

Cognitive Domain: Knowledge

Answer Location: Introduction

Difficulty Level: Easy

2. The advent of the telephone, electricity, and computers are examples of how science has changed and improved our lives.

Ans: T

Cognitive Domain: Knowledge

Answer Location: Introduction

Difficulty Level: Easy

3. In our everyday lives we make decisions, some of which are based on scientific information and some that are based on personal sources.

Ans: T

Cognitive Domain: Knowledge

Answer Location: Introduction

Difficulty Level: Easy

4. Using the research method does not reduce subjective bias in any way.

Ans: F

Cognitive Domain: Knowledge

Answer Location: Definitions of Science and Research

Difficulty Level: Easy

5. A potential criticism of research is that inevitably the researcher’s own bias and selection of what to observe creates problems.

Ans: T

Cognitive Domain: Knowledge

Answer Location: Definitions of Science and Research

Difficulty Level: Easy

6. In counseling and psychology, there has been a relatively long tradition of graduate-level training from a Practitioner–Science orientation.

Ans: F

Cognitive Domain: Knowledge

Answer Location: Practitioner–Scientist

Difficulty Level: Easy

7. Most practitioners have been dissatisfied with the heavy emphasis on scientific methods and knowledge.

Ans: T

Cognitive Domain: Knowledge

Answer Location: Practitioner–Scientist

Difficulty Level: Easy

8. Research advances knowledge in the field of psychology and often guides clinical practice; therefore, most psychologists conduct research after graduate school.

Ans: F

Cognitive Domain: Knowledge

Answer Location: Practitioner–Scientist

Difficulty Level: Easy

9. The importance of using and applying skills in evaluating research is founded on the classic view of the Scientist–Practitioner model.

Ans: T

Cognitive Domain: Knowledge

Answer Location: Relevance of Using and Applying Skills in Evaluating Research

Difficulty Level: Easy

10. As professionals, we have an obligation to carefully evaluate knowledge and research results that may be used in the practice of our professions.

Ans: T

Cognitive Domain: Knowledge

Answer Location: Relevance of Using and Applying Skills in Evaluating Research

Difficulty Level: Easy

**Short Answer**

1. Best and Kahn (2003) defined science as \_\_\_\_\_\_.

Ans: an approach to the gathering of knowledge rather than a field of subject matter

Cognitive Domain: Comprehension

Answer Location: Definitions of Science and Research

Difficulty Level: Easy

2. Moore (1983) defined research as \_\_\_\_\_\_.

Ans: an objective, systematic, testable process for obtaining knowledge about our world

Cognitive Domain: Comprehension

Answer Location: Definitions of Science and Research

Difficulty Level: Easy

3. Salkind (2006) suggested that there are a number of elements of quality research; they are \_\_\_\_\_\_.

Ans: (1) can be replicated, (2) is generalizable to other settings, (3) is based on a reasonable rationale and linked to a theory or theories, (4) are not based upon political beliefs, (5) is subjective.

Cognitive Domain: Comprehension

Answer Location: Definitions of Science and Research

Difficulty Level: Easy

4. Your text identified two sources’ of knowledge; discuss each.

Ans: experience; authority

Cognitive Domain: Comprehension

Answer Location: Definitions of Science and Research

Difficulty Level: Easy

5. What are the four different types of knowledge according to the text? Discuss each.

Ans: description, prediction, improvement, and explanation

Cognitive Domain: Comprehension

Answer Location: Definitions of Science and Research

Difficulty Level: Easy

6. List and discuss the four types of errors noted by Babbie (2011).

Ans: (1) inaccurate observation, (2) overgeneralization, (3) selective observation, and (4) illogical reasoning

Cognitive Domain: Comprehension

Answer Location: Definitions of Science and Research

Difficulty Level: Easy

7. Discuss the concept of Practitioner–Scientist.

Ans: A professional splitting his or her focus on both practice and using the scientific method through research. Using research to inform practice and using practice to inform research evaluation.

Cognitive Domain: Analysis

Answer Location: Practitioner–Scientist

Difficulty Level: Medium

8. Accepting the results of a scientific study without \_\_\_\_\_\_the methods is analogous to buying something without ever test-driving it.

Ans: systematically evaluating

Cognitive Domain: Comprehension

Answer Location: Relevance of Using and Applying Skills in Evaluating Research

Difficulty Level: Easy

9. A research article is typically composed of four major sections: \_\_\_\_\_\_, \_\_\_\_\_\_, \_\_\_\_\_\_, and\_\_\_\_\_\_.

Ans: introduction; methods; results; discussion

Cognitive Domain: Comprehension

Answer Location: Purpose and Overview of the Text

Difficulty Level: Easy

10. Discuss the scientific realism view for explaining events.

Ans: The world is composed of layers of causal structures, some of which are not easily observable. The job of the researcher is to identify the various causal structures and how they interact to produce and effect.

Cognitive Domain: Comprehension

Answer Location: Assumptions About Science and Research

Difficulty Level: Medium

# Essay

1. The words *science* and *research* have significant meaning in our current world. Discuss how they have impacted our lives over the last fifty (50) years.

Ans: Student should discuss the media, technology, and government.

Cognitive Domain: Analysis

Answer Location: Introduction

Difficulty Level: Medium

2. Discuss the relevance of using and applying skills in evaluating research.

Ans: Students must include in their response that evaluating how knowledge is generated is a key to functioning as a professional and differentiates those with advanced degrees from those who are not trained.

Cognitive Domain: Analysis

Answer Location: Relevance of Using and Applying Skills in Evaluating Research

Difficulty Level: Medium

3. Heiman (1995) cited several important assumptions about science that may be helpful in understanding the difference between scientific activity and nonscience. Identify and discuss these assumptions.

Ans: Students should include in their response the concept of lawfulness, that nature is understandable, postpositivist approach, and the scientific realism view.

Cognitive Domain: Analysis

Answer Location: Assumptions About Science and Research

Difficulty Level: Medium

4. List the steps to scientific research. Give an example in educational research illustrating each step.

Ans: (1) identify the problem, (2) define the problem operationally, (3) develop hypotheses or research question, (4) identify and develop the research design (procedures), (5) develop and/or identify techniques or instruments that can be used to gain knowledge about the identified problem, (6) collect data, (7) analyze the data collected and (8) generate conclusion about the data.

Cognitive Domain: Application

Answer Location: Steps in the Scientific Process

Difficulty Level: Hard

5. Explain how the steps in scientific research relate to sections of a journal article.

Ans: (1) Introduction, (2) review of the literature, (3) purpose statement, (4) methods sample, (5) procedures, (6) instruments, (7) results, and (8) discussion.

Cognitive Domain: Application

Answer Location: Purpose and Overview of the Text

Difficulty Level: Hard