Chapter 1: Introduction to Cognitive Psychology

Test Bank

# Multiple Choice

1. We use \_\_\_\_\_\_ to accomplish everyday tasks.

a. neuroscience

b. cognition

c. correlation

d. priming

Ans: B

Learning Objective: 1-1: What is cognitive psychology? How did it develop as a field?

Cognitive Domain: Knowledge

Answer Location: What Is Cognitive Psychology?

Difficulty Level: Easy

2. Which of these terms refers specifically to the ability to focus on one stimulus among the many that are in our environment?

a. sensory perception

b. attentional process

c. memory retrieval

d. language process

Ans: B

Learning Objective: 1-1: What is cognitive psychology? How did it develop as a field?

Cognitive Domain: Knowledge

Answer Location: What Is Cognitive Psychology?

Difficulty Level: Easy

3. Cognitive psychologists who focus on the role of consciousness in human thought processes want to know how much \_\_\_\_\_\_ we have in our behaviors.

a. repetitiveness

b. social dysfunction

c. ability

d. conscious choice

Ans: D

Learning Objective: 1-1: What is cognitive psychology? How did it develop as a field?

Cognitive Domain: Knowledge

Answer Location: What Is Cognitive Psychology?

Difficulty Level: Easy

4. Cognitive psychology is broad, and thus overlaps with many other fields including neuroscience, philosophy, and \_\_\_\_\_\_.

a. chemistry

b. astronomy

c. linguistics

d. robotics

Ans: C

Learning Objective: 1-1: What is cognitive psychology? How did it develop as a field?

Cognitive Domain: Knowledge

Answer Location: What Is Cognitive Psychology?

Difficulty Level: Easy

5. Ancient scholars in which field asked the first questions related to cognitive psychology?

a. behaviorism

b. sociology

c. biology

d. philosophy

Ans: D

Learning Objective: 1-1: What is cognitive psychology? How did it develop as a field?

Cognitive Domain: Knowledge

Answer Location: Development of Cognitive Psychology

Difficulty Level: Easy

6. Aristotle suggested that a human's memory is like a message carved into wax. What did he mean by this?

a. Memories are difficult to form, like trying to write on a wax tablet with a stick.

b. Memories can be surprising, like seeing messages carved into wax.

c. Like messages carved into a tablet, our memories endure for our entire lives.

d. Like messages on a heated wax tablet, our memories can blur or disappear.

Ans: D

Learning Objective: 1-1: What is cognitive psychology? How did it develop as a field?

Cognitive Domain: Application

Answer Location: Development of Cognitive Psychology

Difficulty Level: Medium

7. Who was one of the first psychologists to study cognition?

a. John Watson

b. Wilhelm Wundt

c. B. F. Skinner

d. Sigmund Freud

Ans: B

Learning Objective: 1-2: How have psychologists approached the study of cognition?

Cognitive Domain: Knowledge

Answer Location: Development of Cognitive Psychology

Difficulty Level: Easy

8. Which psychologist extensively tested his own memory to develop theories of cognition?

a. Aristotle

b. Wundt

c. Ebbinghaus

d. Chomsky

Ans: C

Learning Objective: 1-2: How have psychologists approached the study of cognition?

Cognitive Domain: Knowledge

Answer Location: Development of Cognitive Psychology

Difficulty Level: Easy

9. The study of cognition fell out of favor because of the rise in popularity of \_\_\_\_\_\_.

a. philosophy

b. neuroscience

c. behaviorism

d. sociology

Ans: C

Learning Objective: 1-2: How have psychologists approached the study of cognition?

Cognitive Domain: Knowledge

Answer Location: Development of Cognitive Psychology

Difficulty Level: Easy

10. A belief in cognitive psychology reemerged following which event?

a. a series of experiments showing how learning is affected by behavioral conditioning

b. John Watson’s experimentation on Little Albert

c. Sigmund Freud’s discussion of the psychosexual stages of development

d. the development of information processing approaches to study the mind and behavior

Ans: D

Learning Objective: 1-2: How have psychologists approached the study of cognition?

Cognitive Domain: Knowledge

Answer Location: Development of Cognitive Psychology

Difficulty Level: Easy

11. Dr. Smith believes that overt, observable behavior is the only valid way that we can study people. He is a \_\_\_\_\_\_.

a. sociologist

b. behaviorist

c. neuroscientist

d. biologist

Ans: B

Learning Objective: 1-2: How have psychologists approached the study of cognition?

Cognitive Domain: Application

Answer Location: Development of Cognitive Psychology

Difficulty Level: Medium

12. Who invented the term “cognitive psychology”?

a. Noam Chomsky

b. Sigmund Freud

c. Wilhelm Wundt

d. Ulric Neisser

Ans: D

Learning Objective: 1-2: How have psychologists approached the study of cognition?

Cognitive Domain: Knowledge

Answer Location: Development of Cognitive Psychology

Difficulty Level: Easy

13. Which of these is an advantage of behaviorism?

a. It encourages self-reporting by research subjects, who share their thoughts and feelings with scientists.

b. Its research focuses on identifiable, visible actions and does not rely on subjects’ descriptions or impressions.

c. It proves that language abilities result from cognitive processes inherent to humans.

d. Its dual focus allows researchers to study overt behaviors and the processes behind them.

Ans: B

Learning Objective: 1-2: How have psychologists approached the study of cognition?

Cognitive Domain: Application

Answer Location: Development of Cognitive Psychology

Difficulty Level: Medium

14. If you think of cognitive processing as a type of information processing, then the brain is the \_\_\_\_\_\_ and the cognitive processes themselves are the \_\_\_\_\_\_.

a. hardware; software

b. response; stimulus

c. software; hardware

d. stimulus; response

Ans: A

Learning Objective: 1-2: How have psychologists approached the study of cognition?

Cognitive Domain: Knowledge

Answer Location: Development of Cognitive Psychology

Difficulty Level: Easy

15. Dr. Chen asserts that knowledge about the world is represented in our minds such that cognitive processes can operate on the representations. He is a(n) \_\_\_\_\_\_.

a. representationalist

b. biological perspectivist

c. behavioralist

d. embodied cognitionist

Ans: A

Learning Objective: 1-2: How have psychologists approached the study of cognition?

Cognitive Domain: Application

Answer Location: Development of Cognitive Psychology

Difficulty Level: Medium

16. Using a computer or information-processing model would most accurately depict which approach to cognition?

a. embodied cognition

b. behaviorist

c. representationalist

d. linguistic

Ans: C

Learning Objective: 1-2: How have psychologists approached the study of cognition?

Cognitive Domain: Comprehension

Answer Location: Representationalism

Difficulty Level: Medium

17. Your psychology professor tells you, “Our cognitive processes exist mainly to provide a means of interacting with the world around us.” Which approach to cognitive psychology is this?

a. embodied cognition

b. representationalist

c. behaviorist

d. biological determinalist

Ans: A

Learning Objective: 1-2: How have psychologists approached the study of cognition?

Cognitive Domain: Comprehension

Answer Location: Embodied Cognition

Difficulty Level: Medium

18. Dr. Martinez performed a study in which participants in one group studied for an exam by acting out the principles in their textbook, and the other group studied by reading the chapters over and over. This study most closely illustrates the \_\_\_\_\_\_.

a. embodied cognition approach

b. biological perspective

c. representationalist approach

d. cognitive-behavioral approach

Ans: A

Learning Objective: 1-2: How have psychologists approached the study of cognition?

Cognitive Domain: Application

Answer Location: Embodied Cognition

Difficulty Level: Medium

19. Some investigators are interested in how cognition is associated with brain activity. This interest represents the \_\_\_\_\_\_.

a. embodied cognition approach

b. cognitive-behavioral approach

c. representationalist approach

d. biological perspective

Ans: D

Learning Objective: 1-2: How have psychologists approached the study of cognition?

Cognitive Domain: Comprehension

Answer Location: Biological Perspective

Difficulty Level: Medium

20. Researchers use \_\_\_\_\_\_ to study the way in which neurons are connected in networks in the brain and to understand how different cognitive processes work.

a. brain activity

b. connectionist models

c. behavior indications

d. language structures

Ans: B

Learning Objective: 1-2: How have psychologists approached the study of cognition?

Cognitive Domain: Analysis

Answer Location: Biological Perspective

Difficulty Level: Hard

21. The \_\_\_\_\_\_ is a method of gaining knowledge in a field that relies on observations of phenomena and allows for tests of hypotheses about these phenomena.

a. representationalist approach

b. biological perspective

c. scientific method

d. embodied cognition approach

Ans: C

Learning Objective: 1-2: How have psychologists approached the study of cognition?

Cognitive Domain: Knowledge

Answer Location: The Scientific Method

Difficulty Level: Easy

22. As a graduate student in psychology, you design a study on how lawbreakers who get away with their crimes react to news of others' crimes. Your graduate adviser rejects your study because it is not \_\_\_\_\_\_.In other words, it cannot be evaluated through observation.

a. negotiable

b. testable

c. accurate

d. parsimonious

Ans: B

Learning Objective: 1-4: What behaviors do psychologists observe to study cognition?

Cognitive Domain: Analysis

Answer Location: The Scientific Method

Difficulty Level: Hard

23. John went to the bank, where he encountered a very rude, grumpy bank teller. Rather than getting angry and being rude back, John was polite through the encounter while thinking, “This person must be going through a difficult time for her to be so rude, so I shouldn’t take it personally.” John’s attitude best illustrates \_\_\_\_\_\_.

a. determinism

b. testability

c. reliability

d. parsimony

Ans: A

Learning Objective: 1-4: What behaviors do psychologists observe to study cognition?

Cognitive Domain: Analysis

Answer Location: The Scientific Method

Difficulty Level: Hard

24. Elizabeth’s sister, Meredith, isn’t answering her phone when Elizabeth calls. Elizabeth thinks, “Well, either Meredith’s phone has been stolen, or the battery died.” Concluding that Meredith’s battery likely died and that her phone wasn’t stolen would best illustrate \_\_\_\_\_\_.

a. circular reasoning

b. determinism

c. parsimony

d. testability

Ans: C

Learning Objective: 1-4: What behaviors do psychologists observe to study cognition?

Cognitive Domain: Analysis

Answer Location: The Scientific Method

Difficulty Level: Hard

25. Dr. Smith is developing a new drug to treat headaches. To test this drug, she develops a study in which one group gets the new drug, and the other gets a placebo, or a fake pill. Dr. Smith measures whether headaches improve by giving each participant a survey each day. The amount of improvement, as measured by the survey, is the \_\_\_\_\_\_ variable.

a. independent

b. dependent

c. non-response

d. explanatory

Ans: B

Learning Objective: 1-3: What types of research methods are useful in the study of cognition?

Cognitive Domain: Application

Answer Location: The Scientific Method

Difficulty Level: Medium

26. Dr. Smith is developing a new drug to treat headaches. To test this drug, she develops a study in which one group gets the new drug, and the other gets a placebo, or a fake pill. Dr. Smith measures whether headaches improve by giving each participant a survey each day. The drug is the \_\_\_\_\_\_ variable.

a. independent

b. dependent

c. response

d. optional

Ans: A

Learning Objective: 1-3: What types of research methods are useful in the study of cognition?

Cognitive Domain: Application

Answer Location: The Scientific Method

Difficulty Level: Medium

27. What kind of research methodology focuses on intensive analyses of a single individual?

a. surveys

b. case studies

c. correlational studies

d. naturalistic observations

Ans: B

Learning Objective: 1-3: What types of research methods are useful in the study of cognition?

Cognitive Domain: Comprehension

Answer Location: Research Methodologies

Difficulty Level: Medium

28. Why did so many researchers make one individual, Henry Molaison, the subject of their research?

a. He was unusually insightful in how he described his thought processes, so he became the focus of many case studies.

b. Molaison had incredibly fast reflexes, which made him one of a kind.

c. He was so neurotypical in his responses that scientists could study just him instead of hundreds of other people.

d. Molaison had an unusual illness that caused him to undergo risky surgery, so there were few other subjects like him.

Ans: D

Learning Objective: 1-1: What is cognitive psychology? How did it develop as a field?

Cognitive Domain: Knowledge

Answer Location: Research Methodologies

Difficulty Level: Medium

29. Which of these is essential to every correlational study?

a. the ability to focus on just one variable

b. a group of subjects to study

c. the chance to collect responses with maximal impact on the variable of interest

d. a single subject who will agree to in-depth testing

Ans: B

Learning Objective: 1-2: How have psychologists approached the study of cognition?

Cognitive Domain: Knowledge

Answer Location: Research Methodologies

Difficulty Level: Easy

30. If a researcher were interested in studying how multiple variables relate to each other, which research approach would he or she likely use?

a. a correlational study

b. an experimental study

c. a case study

d. an independent variable

Ans: A

Learning Objective: 1-3: What types of research methods are useful in the study of cognition?

Cognitive Domain: Comprehension

Answer Location: Research Methodologies

Difficulty Level: Medium

31. A group of scientists notices that people who smoke often develop cancer later in life. To test this, they design a longitudinal study in which they take note of how many cigarettes each participant smokes each day, how many years each participant smokes, and whether he or she develops any kind of cancer at any point. What type of study is this?

a. an experimental study

b. a correlational study

c. a case study

d. a survey study

Ans: B

Learning Objective: 1-3: What types of research methods are useful in the study of cognition?

Cognitive Domain: Application

Answer Location: Research Methodologies

Difficulty Level: Medium

32. A(n) \_\_\_\_\_\_ is designed to simplify the contexts surrounding the behavior of interest, allowing for focused investigation of the impact of a relatively small set of variables.

a. correlational study

b. survey study

c. case study

d. experimental study

Ans: D

Learning Objective: 1-3: What types of research methods are useful in the study of cognition?

Cognitive Domain: Comprehension

Answer Location: Research Methodologies

Difficulty Level: Medium

33. The speed of neuronal transmission is one meter per \_\_\_\_\_\_.

a. millisecond

b. second

c. 10 seconds

d. minute

Ans: B

Learning Objective: 1-3: What types of research methods are useful in the study of cognition?

Cognitive Domain: Comprehension

Answer Location: Commonly Used Measures Within Cognitive Psychology

Difficulty Level: Medium

34. Which of these is a way that cognitive researchers measure mental processing?

a. pulse rate

b. breathing rate

c. type of memory errors

d. speed of hand movements

Ans: C

Learning Objective: 1-3: What types of research methods are useful in the study of cognition?

Cognitive Domain: Knowledge

Answer Location: Commonly Used Measures Within Cognitive Psychology

Difficulty Level: Medium

35. Who was the German physiologist who studied the speed of neuronal transmission by attaching electrical wires to the leg muscles of frogs?

a. Herman von Helmhotz

b. B. F. Skinner

c. Ulric Neisser

d. Wilhelm Wundt

Ans: A

Learning Objective: 1-4: What behaviors do psychologists observe to study cognition?

Cognitive Domain: Knowledge

Answer Location: Commonly Used Measures Within Cognitive Psychology

Difficulty Level: Easy

36. Your psychology professor asks you to take part in an experiment that will measure how speedily and accurately you can remember details about a song. Which of these will your professor measure?

a. innate intelligence

b. mental chronometry

c. musical physicality

d. rhythmic priming

Ans: B

Learning Objective: 1-4: What behaviors do psychologists observe to study cognition?

Cognitive Domain: Application

Answer Location: Commonly Used Measures Within Cognitive Psychology

Difficulty Level: Medium

37. In the 1930s, Frederic Bartlett discovered that \_\_\_\_\_\_ could contribute to memory distortion.

a. sophisticated comparisons

b. short reaction times

c. metaphors

d. stereotypes

Ans: D

Learning Objective: 1-1: What is cognitive psychology? How did it develop as a field?

Cognitive Domain: Knowledge

Answer Location: Commonly Used Measures Within Cognitive Psychology

Difficulty Level: Easy

38. A researcher is interested in studying how people memorize lists of associated words. The most appropriate dependent variable for an experiment like this would be \_\_\_\_\_\_.

a. percentage correct

b. response time

c. eye tracking

d. response duration

Ans: A

Learning Objective: 1-4: What behaviors do psychologists observe to study cognition?

Cognitive Domain: Application

Answer Location: Commonly Used Measures Within Cognitive Psychology

Difficulty Level: Easy

39. What methods, other than accuracy and response time, do investigators use to study mental processes?

a. hand movements

b. running speed

c. brain visualization measures

d. driving skill

Ans: C

Learning Objective: 1-4: What behaviors do psychologists observe to study cognition?

Cognitive Domain: Knowledge

Answer Location: Commonly Used Measures Within Cognitive Psychology

Difficulty Level: Easy

40. Why do many scientists measure eye movement as a way of understanding cognition?

a. It is impossible to monitor activity within a living brain, but eye movement helps scientists understand visual memory.

b. It is likely that if we look at something for at least a few seconds, then we are mentally processing details about that person or thing.

c. Many scientists believe that the sooner a subject looks away from something, the more time he or she dedicates to processing information about it.

d. Eye movements lead to corresponding behaviors in the olfactory and auditory sense systems.

Ans: B

Learning Objective: 1-4: What behaviors do psychologists observe to study cognition?

Cognitive Domain: Comprehension

Answer Location: Commonly Used Measures Within Cognitive Psychology

Difficulty Level: Medium

41. How are scientists using new techniques such as functional magnetic resonance imaging and electroencephalography?

a. as the beginning of evidence-based cognitive psychology

b. as a replacement for older methods

c. in conjunction with older methods

d. to replace cognitive psychology

Ans: C

Learning Objective: 1-4: What behaviors do psychologists observe to study cognition?

Cognitive Domain: Comprehension

Answer Location: Commonly Used Measures Within Cognitive Psychology

Difficulty Level: Medium

42. What is the drawback to most methods that researchers use to measure cognitive processing?

a. Thanks to technology, human cognition is changing rapidly.

b. Human subjects can accurately push buttons for only a few minutes at a time.

c. The subjects' stereotypical beliefs interfere with cognition.

d. The measurements are indirect and based on assumptions.

Ans: D

Learning Objective: 1-4: What behaviors do psychologists observe to study cognition?

Cognitive Domain: Comprehension

Answer Location: Commonly Used Measures Within Cognitive Psychology

Difficulty Level: Medium

# True/False

1. Neuroscience, linguistics, attention, and perception are all part of the study of cognitive psychology.

Ans: T

Learning Objective: 1-1: What is cognitive psychology? How did it develop as a field?

Cognitive Domain: Knowledge

Answer Location: What Is Cognitive Psychology?

Difficulty Level: Easy

2. Noam Chomsky suggested that language is learned through behavioral conditioning.

Ans: F

Learning Objective: 1-1: What is cognitive psychology? How did it develop as a field?

Cognitive Domain: Comprehension

Answer Location: Development of Cognitive Psychology

Difficulty Level: Medium

3. Modern psychologists accept the study of both behavior and cognition.

Ans: T

Learning Objective: 1-3: What types of research methods are useful in the study of cognition?

Cognitive Domain: Comprehension

Answer Location: Development of Cognitive Psychology

Difficulty Level: Medium

4. Wilhelm Wundt coined the term “cognitive psychology” and is considered the father of this field.

Ans: F

Learning Objective: 1-1: What is cognitive psychology? How did it develop as a field?

Cognitive Domain: Knowledge

Answer Location: Development of Cognitive Psychology

Difficulty Level: Easy

5. The computer and information-processing models of cognition led to the representationalist view of cognitive processes.

Ans: T

Learning Objective: 1-1: What is cognitive psychology? How did it develop as a field?

Cognitive Domain: Comprehension

Answer Location: Representationalism

Difficulty Level: Medium

6. The independent variable is the factor in an experiment that the researcher manipulates.

Ans: T

Learning Objective: 1-3: What types of research methods are useful in the study of cognition?

Cognitive Domain: Knowledge

Answer Location: The Scientific Method

Difficulty Level: Easy

7. The dependent variable is the factor that a researcher believes influences the behavior of interest.

Ans: F

Learning Objective: 1-3: What types of research methods are useful in the study of cognition?

Cognitive Domain: Knowledge

Answer Location: The Scientific Method

Difficulty Level: Easy

8. There can be more than one independent variable in an experimental study.

Ans: T

Learning Objective: 1-3: What types of research methods are useful in the study of cognition?

Cognitive Domain: Comprehension

Answer Location: Research Methodologies

Difficulty Level: Medium

9.Neuronal transmission is as fast as the speed of light.

Ans: F

Learning Objective: 1-4: What behaviors do psychologists observe to study cognition?

Cognitive Domain: Knowledge

Answer Location: Commonly Used Measures Within Cognitive Psychology

Difficulty Level: Easy

10. Eyewitness testimony is highly accurate because of the speed at which the human brain transmits and stores thoughts.

Ans: F

Learning Objective: 1-4: What behaviors do psychologists observe to study cognition?

Cognitive Domain: Knowledge

Answer Location: Commonly Used Measures Within Cognitive Psychology

Difficulty Level: Easy

# Short Answer

1. Explain how Noam Chomsky’s work on language acquisition changed the field of cognitive psychology. Do you agree or disagree with his ideas? Explain your answer.

Ans: Student examples will vary. A sample answer follows.

Before Noam Chomsky published his work on language acquisition in 1959, behaviorism dominated the field of cognitive psychology. One of the most important behaviorists, B. F. Skinner, suggested that children develop language by imitating their parents and then being rewarded or punished by the parents. Chomsky disagreed, pointing out that children are able to speak sentences that they have never heard before. According to Chomsky, language comes from capabilities that we have within us, not from external rewards or punishments.

I agree with Chomsky’s ideas, but I believe that behaviorism remains the foundation of cognitive psychology. Theories are important, but without experimentation, we would have theories that had few results to back them up.

Learning Objective: 1-1: What is cognitive psychology? How did it develop as a field?

Cognitive Domain: Analysis

Answer Location: Development of Cognitive Psychology

Difficulty Level: Hard

2. Discuss the differences between an independent variable and a dependent variable. Give an example of each.

Ans: A correct answer should detail that independent variables are those that are manipulated, while dependent variables are those that are affected by changes in the independent variable. An appropriate example of an independent variable would be a new drug, and an appropriate dependent variable would be a survey that assesses drug effects.

Learning Objective: 1-3: What types of research methods are useful in the study of cognition?

Cognitive Domain: Analysis

Answer Location: The Scientific Method

Difficulty Level: Hard

3. Distinguish between correlational designs and experimental designs. Provide an example of each.

Ans: Student examples will vary. A sample answer follows.

Correlational designs measure associations between variables, and they do not indicate cause and effect. An example of a correlational design is one in which researchers set up cameras on soccer fields and record how many players play and for how long.

Experimental designs are usually simpler and more focused than correlational ones. Experimental designs indicate causal inference, and researchers use them to determine if one variable causes an effect in another. A study in which the researcher invites subjects to try two kinds of potato chips and choose the kind they prefer is an experimental design.

Learning Objective: 1-4: What behaviors do psychologists observe to study cognition?

Cognitive Domain: Analysis

Answer Location: Research Methodologies

Difficulty Level: Hard

4. Compare and contrast the following approaches to cognitive psychology: representationalism, embodied cognition, and the biological perspective. Then tell which approach interests you most and why.

Ans: Student examples will vary. A sample answer follows.

A representationalist approach suggests that knowledge about the world is represented in our minds, and cognitive processes can operate on the representations. The embodied cognition approach suggests that cognition is the interaction between humans and their environment. The biological perspective suggests that brain activity is indicative of cognition and that measuring it can tell one more about cognitive processes.

I am most interested in embodied cognition because environmental stimuli--such as noise pollution, calming music, temperature and humidity, the presence or absence of odors, and many other factors--can affect us in so many ways.

Learning Objective: 1-2: How have psychologists approached the study of cognition?

Cognitive Domain: Analysis

Answer Location: Current Approaches to the Study of Cognition

Difficulty Level: Hard

5. Define indirect measurement and explain why most cognitive psychology experiments rely on it. Give an example of it. What is the drawback to this type of measurement?

Ans: Student examples will vary. A sample answer follows.

In cognitive psychology, indirect measurement means observing and counting something related to a process rather than studying the process itself. For instance, a study that examines people’s response times to stimuli measures the accuracy of answers or the speed of button pushing. That is an indirect measurement because the researchers are observing what they believe is the outcome of cognition, not the cognition itself.

The drawback to indirect measurement is that experimenters are assuming that the behavior they measure is related to the cognitive process they wish to study. However, it is not yet possible to observe cognition directly. For this reason, indirect measurement will most likely be in use for a long time.

Learning Objective: 1-4: What behaviors do psychologists observe to study cognition?

Cognitive Domain: Analysis

Answer Location: Commonly Used Measures Within Cognitive Psychology

Difficulty Level: Hard