

# Chapter 2: Biology and Behavior

## Total Assessment Guide (TAG)

	Learning Objective	Question Type	Remember the Facts	Understand the Concepts	Apply What You Know	Analyze It
2.1: Biological Models of Behavior		Multiple Choice		1		
		Essay				
2.1a Reductionism and Holistic Models	2.1a Describe the reductionist and holistic approaches to studying behavior.	Multiple Choice	3, 4, 5	8, 9	2, 7	6
		Essay				155, 156
2.1b Epigenetic Models	2.1b Define <i>epigenetics</i> and describe how the <i>epigenome</i> acts as a mediator between genetics and the environment.	Multiple Choice	12, 13, 14, 15, 18	11, 16, 19	10, 17	
		Essay				
2.1c Evolutionary Models	2.1c Understand the concepts of evolution and natural selection.	Multiple Choice	20, 21	22, 23		
		Essay				
2.2: The Nervous and Endocrine Systems		Multiple Choice				
		Essay				
2.2a Neurons	2.2a Describe the structure and function of neurons.	Multiple Choice	24, 25, 26, 27, 28, 30, 31, 32, 35, 36, 37, 38, 39, 40, 41	33, 34, 46	29, 42, 43, 44, 45, 47, 48	
		Essay			157	
2.2b Neuronal Transmission	2.2b Explain how neural messages are transmitted.	Multiple Choice	49, 50, 52, 54, 55, 57, 58, 61, 63, 64	51, 59, 60, 66, 67	56, 62, 65	53
		Essay			158	

2.2c Divisions of the Nervous System	2.2c Identify the major divisions of the nervous system.	Multiple Choice	68, 69, 70, 71, 72, 73, 75, 77, 79, 81, 84	78, 83	74, 76, 80, 82		
		Essay			159		
2.2d The Endocrine System	2.2d Explain the purpose and function of the endocrine system.	Multiple Choice	85, 86, 87	88, 89, 90, 92	91		
		Essay			160		
2.3: The Brain		Multiple Choice					
		Essay					
2.3a Studying the Brain	2.3a Describe the basic techniques for studying the brain.	Multiple Choice	97, 100	94, 96, 102	93, 95, 99, 101, 103	98	
		Essay				161	
2.3b Brain Structures	2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.	Multiple Choice	104, 105, 110, 114, 116, 119, 121, 124, 128, 132, 133	112, 117, 118, 122, 125, 130	106, 107, 108, 109, 111, 113, 123, 126, 127, 129, 134, 135	115, 120, 131	
		Essay			162, 163		
2.3c The Cerebral Hemispheres	2.3c Describe the two hemispheres of the brain.	Multiple Choice	136, 137, 139, 141, 144		138, 140	142, 143	
		Essay				164	
2.3d Neuroplasticity and Neurogenesis	2.3d Explain neuroplasticity and neurogenesis.	Multiple Choice	145, 149	146, 148, 150	147		
		Essay				165	
2.4 Studies That Changed Psychology: Then and Now <i>Classic Study: One Brain or Two?</i>	2.4a: Describe how psychology may be applied to interpret and explain new behavioral phenomena.	Multiple Choice		151, 152		153	
		Essay					
	2.4b: Demonstrate psychology information literacy through an understanding of research methods and design.	Multiple Choice					154
		Essay					

## Chapter 2: Biology and Behavior

### MULTIPLE CHOICE

1. Over time, psychologists have developed different \_\_\_\_\_ to act as a framework for organizing concepts and understanding behaviors, and to help with examining the origin of behaviors and predicting future outcomes.

- a) theoretical models
- b) neurological scripts
- c) sociological schemata
- d) social constructs

Answer: a

Learning Objective: None

Topic: 2.1 Biological Models of Behavior

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.2 Develop a working knowledge of psychology's content domains.

2. Mauricio is examining the engine of his motorcycle, trying to understand why he can't get maximum performance out of it. If he was a proponent of the concept of reductionism, what would he do?

- a) He would try using different fuel additives to see if that would generate better horsepower.
- b) He would break it down into its smaller pieces to examine what each one does.
- c) He would go out for a drive and listen carefully to the sound of the engine as it revs.
- d) He would switch out the entire engine for one that he knows is working properly.

Answer: b

Learning Objective: 2.1a Describe the reductionist and holistic approaches to studying behavior.

Topic: 2.1a Reductionism and Holistic Models

Skill Level: Apply What You Know

Difficulty Level: Moderate

APA Learning Objective: 1.2 Develop a working knowledge of psychology's content domains.

3. Taking a holistic approach is the idea that \_\_\_\_\_.

- a) reducing behavior to its most basic elements answers a lot of questions in psychology
- b) the biological processes underlying behavior are critical to understanding the purpose of a behavior
- c) the whole is always greater than the sum of its parts
- d) understanding behavior requires an understanding of the genetics of the organism

Answer: c

Learning Objective: 2.1a Describe the reductionist and holistic approaches to studying behavior.

Topic: 2.1a Reductionism and Holistic Models

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.2 Develop a working knowledge of psychology's content domains.

4. The biopsychosocial model was initially proposed by \_\_\_\_\_.
- a) John Watson
  - b) Charles Darwin
  - c) George Engel
  - d) Phineas Gage

Answer: c

Learning Objective: 2.1a Describe the reductionist and holistic approaches to studying behavior.

Topic: 2.1a Reductionism and Holistic Models

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.2 Develop a working knowledge of psychology's content domains.

5. The biopsychosocial model is a(n) \_\_\_\_\_ model of human behavior.
- a) epigenetic
  - b) reductionistic
  - c) holistic
  - d) evolutionist

Answer: c

Learning Objective: 2.1a Describe the reductionist and holistic approaches to studying behavior.

Topic: 2.1a Reductionism and Holistic Models

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.2 Develop a working knowledge of psychology's content domains.

6. Which of the following pairs of concepts would be considered the most opposite in nature?
- a) Hemispheric specialization and neuroplasticity
  - b) The nervous system and the endocrine system
  - c) Interpersonal and intergroup levels of analysis
  - d) Reductionism and the holistic approach

Answer: d

Learning Objective: 2.1a Describe the reductionist and holistic approaches to studying behavior.

Topic: 2.1a Reductionism and Holistic Models

Skill Level: Analyze It

Difficulty Level: Moderate

APA Learning Objective: 1.2 Develop a working knowledge of psychology's content domains.

7. Janet is a physician at a major medical center. When making assessments and developing treatment plans, she considers her patients' mental health and social situations along with their current physical condition and symptoms. Janet is an adherent of the \_\_\_\_\_ model of healthcare.

- a) biopsychosocial
- b) biomedical
- c) sociological
- d) physiological

Answer: a

Learning Objective: 2.1a Describe the reductionist and holistic approaches to studying behavior.

Topic: 2.1a Reductionism and Holistic Models

Skill Level: Apply What You Know

Difficulty Level: Moderate

APA Learning Objective: 1.2 Develop a working knowledge of psychology's content domains.

8. Within the biopsychosocial model, which of the following levels of variables would include consideration of genetics and physiological structures?

- a) Biological variables
- b) Psychological variables
- c) Cultural variables
- d) Social variables

Answer: a

Learning Objective: 2.1a Describe the reductionist and holistic approaches to studying behavior.

Topic: 2.1a Reductionism and Holistic Models

Skill Level: Understand the Concepts

Difficulty Level: Easy

APA Learning Objective: 1.2 Develop a working knowledge of psychology's content domains.

9. Within the biopsychosocial model, which of the following levels of variables would include consideration of one's thoughts, emotions, and actions?

- a) Biological variables
- b) Psychological variables
- c) Cultural variables
- d) Social variables

Answer: b

Learning Objective: 2.1a Describe the reductionist and holistic approaches to studying behavior.

Topic: 2.1a Reductionism and Holistic Models

Skill Level: Understand the Concepts

Difficulty Level: Easy

APA Learning Objective: 1.2 Develop a working knowledge of psychology's content domains.

10. Jason carries the genes for a rare genetic disorder, but he does not have any symptoms of the disease. In this case, we can say that the disease is part of Jason's \_\_\_\_\_.

- a) genotype
- b) phenotype
- c) dominant-recessive pattern
- d) multifactorial inheritance

Answer: a

Learning Objective: 2.1b Define *epigenetics* and describe how the *epigenome* acts as a mediator between genetics and the environment.

Topic: 2.1b Epigenetic Models

Skill Level: Apply What You Know

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

11. An individual's \_\_\_\_\_ refers to what that person looks like as a consequence of their genetic code and their environment.

- a) phenotype
- b) genotype
- c) sex chromosomes
- d) polygenic inheritance

Answer: a

Learning Objective: 2.1b Define *epigenetics* and describe how the *epigenome* acts as a mediator between genetics and the environment.

Topic: 2.1b Epigenetic Models

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

12. The “instruction manual” for your body, consisting of your genes, is called your \_\_\_\_\_.

- a) phenotype
- b) genome
- c) genotype
- d) epigenetics

Answer: c

Learning Objective: 2.1b Define *epigenetics* and describe how the *epigenome* acts as a mediator between genetics and the environment.

Topic: 2.1b Epigenetic Models

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

13. Human beings have \_\_\_\_\_ chromosomes in normal developmental cases.

- a) 13
- b) 23
- c) 32
- d) 46

Answer: d

Learning Objective: 2.1b Define *epigenetics* and describe how the *epigenome* acts as a mediator between genetics and the environment.

Topic: 2.1b Epigenetic Models

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 92    a = 3    b = 2    c = 92    d = 3    r = .25

14. The complete set of all genes within a human cell is \_\_\_\_\_.

- a) the epigenome
- b) the human genome
- c) the human phenotype
- d) homogenetic inheritance

Answer: b

Learning Objective: 2.1b Define *epigenetics* and describe how the *epigenome* acts as a mediator between genetics and the environment.

Topic: 2.1b Epigenetic Models

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

15. The human genome contains about \_\_\_\_\_ genes.

- a) 25,000
- b) 45,000
- c) 65,000
- d) 85,000

Answer: a

Learning Objective: 2.1b Define *epigenetics* and describe how the *epigenome* acts as a mediator between genetics and the environment.

Topic: 2.1b Epigenetic Models

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

16. An architect builds a home from blueprints that contain the full plan for the layout of the house. In this case, the blueprints are like the \_\_\_\_\_ of the human, and the house is the \_\_\_\_\_.

- a) homogenetics; epigenome
- b) epigenome; phenotype
- c) genotype; phenotype
- d) homogenetics; genotype

Answer: c

Learning Objective: 2.1b Define *epigenetics* and describe how the *epigenome* acts as a mediator between genetics and the environment.

Topic: 2.1b Epigenetic Models

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

17. Every morning when they get to work, the crew of the local donut shop waits to be told what to do by their manager. Some of them clean, some of them make donuts, and some of them do paperwork. It is the manager who instructs each individual employee on their tasks for the day. If

you were to compare the donut shop to the human genetic system, the manager would serve as a(n) \_\_\_\_\_.

- a) human genome
- b) chromosome
- c) DNA molecule
- d) epigenome

Answer: d

Learning Objective: 2.1b Define *epigenetics* and describe how the *epigenome* acts as a mediator between genetics and the environment.

Topic: 2.1b Epigenetic Models

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

18. The study of the relationship between a person's genetics and the environment in which that person lives is called \_\_\_\_\_.

- a) neurology
- b) biopsychosocialism
- c) neuropathics
- d) epigenetics

Answer: d

Learning Objective: 2.1b Define *epigenetics* and describe how the *epigenome* acts as a mediator between genetics and the environment.

Topic: 2.1b Epigenetic Models

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

19. When a caregiver provides good nutrition, cuddling, and protection, babies are more resilient to stress. This is a great example of \_\_\_\_\_.

- a) epigenetics
- b) survival of the fittest
- c) the human genome
- d) genotypic variability

Answer: a

Learning Objective: 2.1b Define *epigenetics* and describe how the *epigenome* acts as a mediator between genetics and the environment.

Topic: 2.1b Epigenetic Models

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.



20. \_\_\_\_\_ models of human behavior focus primarily on behaviors that are adaptive—those that facilitate the survival of the species—and are shared by all humans.

- a) Holistic
- b) Biopsychosocial
- c) Evolutionary
- d) Epigenetic

Answer: c

Learning Objective: 2.1c Understand the concepts of evolution and natural selection.

Topic: 2.1c Evolutionary Models

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.2 Develop a working knowledge of psychology's content domains.

21. \_\_\_\_\_ developed the theory of evolution, arguing that all organisms evolve in particular ways over long periods of time and survive to pass on their genes to future generations of their species.

- a) Ivan Pavlov
- b) Charles Darwin
- c) Sigmund Freud
- d) Aristotle

Answer: b

Learning Objective: 2.1c Understand the concepts of evolution and natural selection.

Topic: 2.1c Evolutionary Models

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.2 Develop a working knowledge of psychology's content domains.

22. The concepts of variation, inheritance, and survival of the fittest are all essential components of Darwin's theory of \_\_\_\_\_.

- a) natural selection
- b) the human genome
- c) homeopathy
- d) osteopathy

Answer: a

Learning Objective: 2.1c Understand the concepts of evolution and natural selection.

Topic: 2.1c Evolutionary Models

Skill Level: Understand the Concepts

Difficulty Level: Easy

APA Learning Objective: 1.2 Develop a working knowledge of psychology's content domains.

23. The process of natural selection involves the inheritance of genes, the desire of organisms to survive, and the selective survival of those with characteristics that make them more resistant to dangers in the environment. What else is a critical component of natural selection?

- a) Variation in appearance and behaviors
- b) Mutations of the chromosomes
- c) Epigenome defects

d) Epigenetic flaws

Answer: a

Learning Objective: 2.1c Understand the concepts of evolution and natural selection.

Topic: 2.1c Evolutionary Models

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.2 Develop a working knowledge of psychology's content domains.

24. The function of the \_\_\_\_\_ is to carry information to and from all parts of the body.

- a) soma
- b) synapse
- c) nervous system
- d) endorphins

Answer: c

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 91    a = 2   b = 4   c = 91   d = 33    r = .32

% correct 100    a = 0   b = 0   c = 100   d = 0    r = .00

25. The nervous system could be defined as \_\_\_\_\_.

- a) a complex network of wiring and circuits that carries information to and from all parts of the body
- b) a specialized system that is designed to release neurotransmitters into the bloodstream anywhere in the body
- c) all nerves and neurons that are not contained in the brain and spinal cord but that run throughout the body itself
- d) a system of glands, located throughout the body, that secrete hormones and release them into the bloodstream

Answer: a

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 92    a = 92   b = 1   c = 6   d = 1    r = .27

% correct 94    a = 94   b = 1   c = 4   d = 0    r = .26

26. A specialized cell found in the nervous system that receives and sends messages within that system is called a \_\_\_\_\_.

- a) glial cell
- b) neuron

- c) cell body
- d) myelin sheath

Answer: b

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 96    a = 4   b = 96   c = 0   d = 0    r = .19

% correct 97    a = 2   b = 97   c = 1   d = 0    r = .39

27. Neurons in the human body have one purpose, and that is to send messages to \_\_\_\_\_.

- a) other neurons
- b) glial cells
- c) myelin sheaths
- d) dendritic spines

Answer: a

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 96    a = 96   b = 3   c = 1   d = 0    r = .25

% correct 95    a = 95   b = 4   c = 1   d = 0    r = .27

28. The human brain contains somewhere around \_\_\_\_\_ neurons.

- a) 10 million
- b) 50 million
- c) 100 billion
- d) 2 trillion

Answer: c

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 80    a = 5   b = 16   c = 80   d = 9    r = .24

29. Dr. Chapin has just finished a delicate brain operation. He turns to a group of interns and says, "She probably lost about 1,000 \_\_\_\_\_, but since she still has over 100 billion left, she should recover nicely."

- a) medullary cells
- b) neurons

- c) dendrites
- d) mammillary bodies

Answer: b

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Apply What You Know

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 98    a = 1   b = 98   c = 1   d = 0    r = .21

30. The neuron is surrounded by a(n) \_\_\_\_\_, and it has a nucleus that contains genes.

- a) axon
- b) dendrite
- c) cell membrane
- d) myelin sheath

Answer: c

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 82    a = 3   b = 3   c = 82   d = 13    r = .23

31. Every neuron has five parts: \_\_\_\_\_.

- a) myelin, glia, soma, appendage, and apex
- b) dendrite, soma, axon, axon terminals, and nucleus
- c) glia, dendrite, axon, hormones, and cell body
- d) myelin, soma, dendrite, astrocytes, and apex

Answer: b

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

32. In neurons, the branchlike structures that receive messages from other neurons are called \_\_\_\_\_.

- a) axons
- b) nerve bundles
- c) dendrites
- d) synapses

Answer: c

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 84    a = 10   b = 2   c = 84   d = 4     $r = .39$

% correct 83    a = 11   b = 0   c = 83   d = 5     $r = .31$

33. Dendrites are covered in \_\_\_\_\_.

- a) axon terminals
- b) glia
- c) myelin
- d) receptors

Answer: d

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 77    a = 20   b = 77   c = 1   d = 1     $r = .32$

34. \_\_\_\_\_ receive messages from other neurons, and \_\_\_\_\_ send messages to other neurons.

- a) Axons; dendrites
- b) Axons; soma
- c) Soma; glial cells
- d) Dendrites; axons

Answer: d

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 71    a = 23   b = 3   c = 4   d = 71     $r = .39$

% correct 78    a = 17   b = 3   c = 1   d = 78     $r = .46$

35. Which part of a neuron is attached to the soma and carries messages out to other cells?

- a) Soma
- b) Axon
- c) Dendrite
- d) Cell membrane

Answer: b

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 81    a = 2   b = 81   c = 14   d = 4    r = .31

36. The \_\_\_\_\_, or soma, is the single largest part of a human neuron. It contains the cell's DNA and is capable of coordinating the information processing for the cell.

- a) myelin sheath
- b) axon
- c) dendrite
- d) cell body

Answer: d

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

37. A long structure leaving the neuron cell body that action potentials travel along is called the \_\_\_\_\_.

- a) cell membrane
- b) dendrite
- c) axon
- d) myelin sheath

Answer: c

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 70    a = 3   b = 16   c = 70   d = 11    r = .38

38. The function of the neuron's axon is to \_\_\_\_\_.

- a) carry messages to other neurons
- b) regulate the neuron's life processes
- c) receive messages from neighboring neurons
- d) insulate against leakage of electrical impulses

Answer: a

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 67    a = 67   b = 2   c = 10   d = 21     $r = .41$

% correct 80    a = 80   b = 6   c = 13   d = 2     $r = .30$

39. What is the term used to describe the projections located at the end of the axon?

- a) Axon terminals
- b) Synaptic vesicles
- c) Synapses
- d) Receptor sites

Answer: a

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 59    a = 59   b = 15   c = 3   d = 22     $r = .48$

% correct 52    a = 52   b = 20   c = 13   d = 15     $r = .38$

40. Which of the following are the three basic types of neurons?

- a) Reflexes, sensory neurons, motor neurons
- b) Sensory neurons, motor neurons, stem cells
- c) Motor neurons, stem cells, reflexes
- d) Interneurons, sensory neurons, motor neurons

Answer: d

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 89    a = 3   b = 7   c = 0   d = 89     $r = .36$

% correct 79    a = 13   b = 8   c = 0   d = 79     $r = .31$

41. Neurons that carry information from the senses to the brain and spinal cord are called

\_\_\_\_\_.

- a) motor neurons
- b) interneurons
- c) sensory neurons
- d) reflexes

Answer: c

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 75 a = 19 b = 5 c = 75 d = 0 r = .32

% correct 80 a = 11 b = 9 c = 80 d = 1 r = .28

42. Mary steps on a sharp nail. Which neuron is responsible for sending a pain message up her spinal column, where it would then enter into the main area of the cord?

- a) Motor neuron
- b) Interneuron
- c) Sensory neuron
- d) Reflex

Answer: c

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Apply What You Know

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 90 a = 5 b = 3 c = 90 d = 1 r = .27

43. A young woman returns from a day at the beach to find she has developed a severe sunburn. Which neurons are sending the message from her burned skin to her brain to inform her of the pain from the burn?

- a) Sensory neurons
- b) Motor neurons
- c) Synaptic neurons
- d) Association neurons

Answer: a

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Apply What You Know

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 88 a = 88 b = 2 c = 7 d = 3 r = .24

44. LaKeisha places her hand on a hot stove and then quickly removes it. Which of the following are responsible for sending a message to the muscles in LaKeisha's hand, resulting in her pulling it away from the hot stove?

- a) Motor neurons
- b) Interneurons
- c) Sensory neurons
- d) Reflexes

Answer: a

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons



Skill Level: Apply What You Know

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 58    a = 58   b = 2   c = 18   d = 521     $r = .27$

45. A young man reads in a letter that he has just won \$1,000 in a statewide lottery, and he literally jumps for joy. Which neurons are sending messages from his brain to his legs ordering them to jump?

- a) Sensory neurons
- b) Motor neurons
- c) Interaction neurons
- d) Association neurons

Answer: b

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Apply What You Know

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 89    a = 4   b = 89   c = 2   d = 4     $r = .34$

46. Which of the following cells mediate the conversation between sensory and motor neurons?

- a) Motor neurons
- b) Interneurons
- c) Sensory neurons
- d) Reflexes

Answer: b

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 80    a = 8   b = 80   c = 8   d = 3     $r = .37$

47. Ezra is standing over the crib of his son, Max, and he gives Max a big smile. To his delight, Max looks up and smiles back at him. Ezra starts blinking his eyes rapidly, and the child repeats the gesture. Which type of neurons are primarily involved in this mimicry?

- a) Axo-axonal neurons
- b) Interneurons
- c) Dendritic neurons
- d) Mirror neurons

Answer: d

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

48. Three-year-old Candace watches Timmy fall and scrape his knee. She immediately comforts him and provides him with empathy. Candace is using her \_\_\_\_\_.

- a) peripheral nervous system
- b) glial cell system
- c) mirror neuron system
- d) motor neuron system

Answer: c

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

49. What do we call the state of a neuron when it is not firing a neural impulse?

- a) Action potential
- b) Resting potential
- c) Myelination signal
- d) Transmission impulse

Answer: b

Learning Objective: 2.2b Explain how neural messages are transmitted.

Topic: 2.2b Neuronal Transmission

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 84    a = 11   b = 84   c = 1   d = 4     $r = .18$

50. The state during which a neuron contains more negatively charged ions inside the cell than outside the cell and is not firing is referred to as the \_\_\_\_\_.

- a) action potential
- b) quiet potential
- c) synaptic potential
- d) resting potential

Answer: d

Learning Objective: 2.2b Explain how neural messages are transmitted.

Topic: 2.2b Neuronal Transmission

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 85    a = 4   b = 4   c = 7   d = 85     $r = .19$

51. The overall electrical charge of a neuron that is “at rest” is \_\_\_\_\_.
- a) hyperneutral
  - b) positive
  - c) negative
  - d) neutral

Answer: c

Learning Objective: 2.2b Explain how neural messages are transmitted.

Topic: 2.2b Neuronal Transmission

Skill Level: Understand the Concepts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 81    a = 3   b = 2   c = 73   d = 12     $r = .27$

52. When the electric potential in a cell is in firing versus a resting state, this electrical charge reversal is known as the \_\_\_\_\_.
- a) resting potential
  - b) excitation reaction
  - c) action potential
  - d) permeable reaction

Answer: c

Learning Objective: 2.2b Explain how neural messages are transmitted.

Topic: 2.2b Neuronal Transmission

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 75    a = 14   b = 10   c = 75   d = 1     $r = .31$

53. The neural impulse traveling down the axon is \_\_\_\_\_; it gets across the synapse by \_\_\_\_\_.
- a) electrical; remaining electrical but changing from positively charged to negatively charged
  - b) electrical; remaining electrical but changing from negatively charged to positively charged
  - c) electrical; changing into a chemical message
  - d) chemical; changing into an electrical message

Answer: c

Learning Objective: 2.2b Explain how neural messages are transmitted.

Topic: 2.2b Neuronal Transmission

Skill Level: Analyze It

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 50    a = 13   b = 22   c = 50   d = 13     $r = .37$

54. “All or none” is the principle stating that \_\_\_\_\_.
- a) a neuron either fires or does not fire
  - b) a neuron fires at full strength or not at all
  - c) all the dendrites must be receiving messages telling the neuron to fire or it will not fire at all
  - d) all somas must be receiving messages telling the neuron to fire or it will not fire at all

Answer: a

Learning Objective: 2.2b Explain how neural messages are transmitted.

Topic: 2.2b Neuronal Transmission

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 54    a = 54   b = 31   c = 10   d = 5     $r = .37$

% correct 41    a = 41   b = 52   c = 4   d = 3     $r = .29$

55. During the process of an action potential, the cell moves positively charged ions inside the membrane. This is called \_\_\_\_\_.
- a) the all-or-none law
  - b) hyperpolarization
  - c) depolarization
  - d) neurotransmission

Answer: c

Learning Objective: 2.2b Explain how neural messages are transmitted.

Topic: 2.2b Neuronal Transmission

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

56. Often after playing a point, tennis players take a short break, drink water, wipe sweat off their hands, and prepare to play the next point. This process is very similar to the \_\_\_\_\_ in the neuron.
- a) action potential
  - b) resting potential
  - c) refractory period
  - d) depolarization

Answer: c

Learning Objective: 2.2b Explain how neural messages are transmitted.

Topic: 2.2b Neuronal Transmission

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

57. The action potential causes neurotransmitters to be released into the \_\_\_\_\_.
- a) myelin sheath
  - b) axon
  - c) synaptic gap
  - d) synaptic vesicle

Answer: c

Learning Objective: 2.2b Explain how neural messages are transmitted.

Topic: 2.2b Neuronal Transmission

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 59    a = 8   b = 11   c = 59   d = 22     $r = .32$

% correct 56    a = 5   b = 16   c = 56   d = 27     $r = .35$

58. A nerve impulse from one neuron affects the activity of a neighboring neuron at a point of interaction called the \_\_\_\_\_.
- a) corpuscle
  - b) synapse
  - c) transmission cleft
  - d) neuronal junction

Answer: b

Learning Objective: 2.2b Explain how neural messages are transmitted.

Topic: 2.2b Neuronal Transmission

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 96    a = 0   b = 96   c = 3   d = 1     $r = .26$

59. A synapse is most important in \_\_\_\_\_.
- a) separating the medulla from the hindbrain
  - b) regulating the parasympathetic nervous system
  - c) the process of transmitting messages between neurons
  - d) connecting the basal ganglia

Answer: c

Learning Objective: 2.2b Explain how neural messages are transmitted.

Topic: 2.2b Neuronal Transmission

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 96    a = 2   b = 2   c = 96   d = 0     $r = .37$

60. \_\_\_\_\_ neurotransmitters make it more likely that a neuron will fire a message, whereas \_\_\_\_\_ neurotransmitters make it less likely that a neuron will send its message.

- a) Excitatory; inhibitory
- b) Inhibitory; excitatory
- c) Augmentation; depletion
- d) Depletion; augmentation

Answer: a

Learning Objective: 2.2b Explain how neural messages are transmitted.

Topic: 2.2b Neuronal Transmission

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 89    a = 89   b = 8   c = 3   d = 0     $r = .48$

61. The analogy of a key fitting into a lock is used to describe what process in the brain?

- a) The refractory period
- b) A neurotransmitter binding to a receptor
- c) Action potential transmission
- d) The resting membrane potential

Answer: a

Learning Objective: 2.2b Explain how neural messages are transmitted.

Topic: 2.2b Neuronal Transmission

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

62. Sara has been experiencing a serious memory problem. An interdisciplinary team has ruled out a range of causes and believes that a neurotransmitter is involved. Which neurotransmitter is most likely involved in this problem?

- a) GABA
- b) Dopamine
- c) Serotonin
- d) Acetylcholine

Answer: d

Learning Objective: 2.2b Explain how neural messages are transmitted.

Topic: 2.2b Neuronal Transmission

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 33    a = 0   b = 26   c = 41   d = 33     $r = .19$

63. Which neurotransmitter is associated with sleep, mood, and appetite?

- a) GABA

- b) Serotonin
- c) Dopamine
- d) Acetylcholine

Answer: b

Learning Objective: 2.2b Explain how neural messages are transmitted.

Topic: 2.2b Neuronal Transmission

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 60    a = 6   b = 60   c = 25   d = 8    r = .26

64. Which of the following neurotransmitters is known for its role in memory enhancement?

- a) GABA
- b) Glutamate
- c) Serotonin
- d) Norepinephrine

Answer: a

Learning Objective: 2.2b Explain how neural messages are transmitted.

Topic: 2.2b Neuronal Transmission

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

65. Jacqui was in a car accident and broke her leg. While they were trying to remove her from the car, she did not detect the pain of the broken leg. What neurotransmitter was most likely helping her keep her pain in control so she could get out of the car?

- a) Serotonin
- b) Dopamine
- c) Norepinephrine
- d) Endorphins

Answer: d

Learning Objective: 2.2b Explain how neural messages are transmitted.

Topic: 2.2b Neuronal Transmission

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 81    a = 3   b = 7   c = 8   d = 81    r = .42

66. What are two roles of glial cells?

- a) Acting as insulation and providing structure/support to surrounding neurons
- b) Shaping cells and moving new neurons into place
- c) Regulating metabolic activity and serving as pain detectors
- d) Monitoring neural transmission and releasing hormones in the brain

Answer: a

Learning Objective: 2.2b Explain how neural messages are transmitted.

Topic: 2.2b Neuronal Transmission

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 59    a = 59   b = 4   c = 11   d = 22    r = .32

% correct 61    a = 61   b = 8   c = 7   d = 24    r = .32

67. Communication between which two types of cells may be conducive to certain kinds of thoughts, such as imagination, creativity, and dreaming?

- a) Epidermal and adipose cells
- b) Glial cells and neurons
- c) Bipolar and amacrine cells
- d) Ganglion and axonal cells

Answer: b

Learning Objective: 2.2b Explain how neural messages are transmitted.

Topic: 2.2b Neuronal Transmission

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

68. The first major division of the nervous system consists of the \_\_\_\_\_.

- a) central and peripheral nervous systems
- b) brain and spinal cord
- c) somatic and autonomic nervous systems
- d) sympathetic and parasympathetic nervous systems

Answer: a

Learning Objective: 2.2c Identify the major divisions of the nervous system.

Topic: 2.2c Divisions of the Nervous System

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 73    a = 73   b = 20   c = 4   d = 26    r = .41

69. The brain and spinal cord are the major components that make up the \_\_\_\_\_.

- a) central nervous system
- b) somatic nervous system
- c) peripheral nervous system
- d) autonomic nervous system

Answer: a

Learning Objective: 2.2c Identify the major divisions of the nervous system.

Topic: 2.2c Divisions of the Nervous System



Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 100 a = 100 b = 0 c = 0 d = 0 r = .00

% correct 94 a = 94 b = 2 c = 1 d = 2 r = .39

70. The \_\_\_\_\_ is a long bundle of nerves that carries messages from the brain to the body and from the body to the brain. It is responsible for very fast reflexes.

- a) spinal cord
- b) corpus callosum
- c) cerebrum
- d) brainstem

Answer: a

Learning Objective: 2.2c Identify the major divisions of the nervous system.

Topic: 2.2c Divisions of the Nervous System

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 89 a = 89 b = 0 c = 2 d = 9 r = .31

71. The peripheral nervous system consists of \_\_\_\_\_.

- a) all the nerve cells that are outside of the brain and the spinal cord
- b) all nerves in the brain and the spinal cord
- c) the spinal cord and the autonomic system
- d) the brain and the autonomic system

Answer: a

Learning Objective: 2.2c Identify the major divisions of the nervous system.

Topic: 2.2c Divisions of the Nervous System

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 69 a = 69 b = 6 c = 15 d = 10 r = .45

72. The peripheral nervous system consists of the \_\_\_\_\_ and the \_\_\_\_\_ nervous systems.

- a) parasympathetic; somatic
- b) autonomic; sympathetic
- c) autonomic; somatic
- d) parasympathetic; sympathetic

Answer: c

Learning Objective: 2.2c Identify the major divisions of the nervous system.

Topic: 2.2c Divisions of the Nervous System

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 53 a = 53 b = 7 c = 5 d = 35 r = .33

% correct 57 a = 57 b = 11 c = 7 d = 25 r = .40

73. The \_\_\_\_\_ nervous system regulates the muscles over which people have conscious control.

- a) somatic
- b) autonomic
- c) sympathetic
- d) parasympathetic

Answer: a

Learning Objective: 2.2c Identify the major divisions of the nervous system.

Topic: 2.2c Divisions of the Nervous System

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

74. Glinnis is pedaling her bicycle through the park. She is relying on her \_\_\_\_\_ nervous system to help her pedal.

- a) sympathetic
- b) somatic
- c) parasympathetic
- d) autonomic

Answer: b

Learning Objective: 2.2c Identify the major divisions of the nervous system.

Topic: 2.2c Divisions of the Nervous System

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

75. Involuntary muscles and functions are controlled by the \_\_\_\_\_ nervous system.

- a) somatic
- b) autonomic
- c) sympathetic
- d) parasympathetic

Answer: b

Learning Objective: 2.2c Identify the major divisions of the nervous system.

Topic: 2.2c Divisions of the Nervous System

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 64    a = 14   b = 64   c = 14   d = 9     $r = .27$

76. The process of digesting your last snack or meal, or the unconscious regulation of your breathing, is primarily rooted in the \_\_\_\_\_ nervous system.

- a) autonomic
- b) limbic
- c) somatic
- d) secondary

Answer: a

Learning Objective: 2.2c Identify the major divisions of the nervous system.

Topic: 2.2c Divisions of the Nervous System

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 66    a = 66   b = 12   c = 18   d = 4     $r = .44$

77. The autonomic nervous system is divided into the \_\_\_\_\_ and the \_\_\_\_\_ divisions.

- a) central; peripheral
- b) sympathetic; parasympathetic
- c) sensory; motor
- d) limbic; endocrine

Answer: b

Learning Objective: 2.2c Identify the major divisions of the nervous system.

Topic: 2.2c Divisions of the Nervous System

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

78. Which component of the nervous system mobilizes the body in times of stress?

- a) Central
- b) Somatic
- c) Sympathetic
- d) Parasympathetic

Answer: c

Learning Objective: 2.2c Identify the major divisions of the nervous system.

Topic: 2.2c Divisions of the Nervous System

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 60    a = 8   b = 12   c = 60   d = 20     $r = .37$

% correct 69    a = 3   b = 10   c = 69   d = 17     $r = .47$

79. The branch of the autonomic nervous system that prepares the body for quick action in an emergency is the \_\_\_\_\_ division.

- a) central
- b) secondary
- c) sympathetic
- d) parasympathetic

Answer: c

Learning Objective: 2.2c Identify the major divisions of the nervous system.

Topic: 2.2c Divisions of the Nervous System

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 73    a = 1   b = 7   c = 73   d = 19    r = .34

80. As Molly is walking across campus, a car swerves toward her. Her heart races and sweat breaks out as she jumps out of harm's way. This mobilization of energy is due to the action of Molly's \_\_\_\_\_.

- a) somatic nervous system
- b) skeletal nervous system
- c) parasympathetic nervous system
- d) sympathetic nervous system

Answer: d

Learning Objective: 2.2c Identify the major divisions of the nervous system.

Topic: 2.2c Divisions of the Nervous System

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 73    a = 11   b = 0   c = 16   d = 73    r = .48

% correct 81    a = 11   b = 0   c = 9   d = 81    r = .51

81. It's midnight and you are alone in your room studying. You hear a loud crash outside your room and your whole body reacts instantly and furiously. The system that produces these reactions is the \_\_\_\_\_.

- a) central nervous system
- b) sympathetic nervous system
- c) parasympathetic nervous system
- d) limbic system

Answer: a

Learning Objective: 2.2c Identify the major divisions of the nervous system.

Topic: 2.2c Divisions of the Nervous System

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 80 a = 6 b = 80 c = 12 d = 3 r = .52

82. One night, Betty is walking home from the gym to her dorm. When she is approached by a strange man who clearly does not belong on campus, her pupils dilate and she gets goosebumps. What part of Betty's nervous system has been activated?

- a) Somatic
- b) Parasympathetic
- c) Sympathetic
- d) Autonomic

Answer: d

Learning Objective: 2.2c Identify the major divisions of the nervous system.

Topic: 2.2c Divisions of the Nervous System

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 78 a = 2 b = 14 c = 6 d = 78 r = .45

83. Calm is to aroused as \_\_\_\_\_ is to \_\_\_\_\_.

- a) parasympathetic; sympathetic
- b) autonomic; motor
- c) sympathetic; parasympathetic
- d) central; peripheral

Answer: a

Learning Objective: 2.2c Identify the major divisions of the nervous system.

Topic: 2.2c Divisions of the Nervous System

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 77 a = 77 b = 3 c = 21 d = 0 r = .31

84. The branch of the autonomic nervous system that restores the body to normal functioning after arousal and is responsible for calming you down is called the \_\_\_\_\_.

- a) spinal cord
- b) somatic nervous system
- c) sympathetic nervous system
- d) parasympathetic nervous system

Answer: d

Learning Objective: 2.2c Identify the major divisions of the nervous system.

Topic: 2.2c Divisions of the Nervous System

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 66 a = 2 b = 9 c = 23 d = 66 r = .37

85. The system that acts as a network of communication pathways between the brain and the body is called the \_\_\_\_\_.

- a) arousal system
- b) nervous system
- c) limbic system
- d) endocrine system

Answer: d

Learning Objective: 2.2d Explain the purpose and function of the endocrine system.

Topic: 2.2d The Endocrine System

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

86. Endocrine glands \_\_\_\_\_.

- a) secrete hormones directly into the bloodstream
- b) are chemicals released into the bloodstream
- c) are an extensive network of specialized cells
- d) are a thin layer of cells coating the axons

Answer: a

Learning Objective: 2.2d Explain the purpose and function of the endocrine system.

Topic: 2.2d The Endocrine System

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 91    a = 91   b = 5   c = 2   d = 2    r = .56

87. The thyroid and pituitary glands are parts of the \_\_\_\_\_ system.

- a) gonadal
- b) endocrine
- c) nervous
- d) lymphatic

Answer: b

Learning Objective: 2.2d Explain the purpose and function of the endocrine system.

Topic: 2.2d The Endocrine System

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

88. Which of the following is responsible for secreting hormones that travel to other endocrine glands in various parts of the body, inspiring them to release their own hormones?

- a) Adrenal glands
- b) Thyroid gland

- c) Pituitary gland
- d) Gonads

Answer: c

Learning Objective: 2.2d Explain the purpose and function of the endocrine system.

Topic: 2.2d The Endocrine System

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

89. What are the two basic functions of the endocrine system?

- a) An activation effect and a deactivation effect
- b) Organizing “fight” or stimulating “flight”
- c) An organizational role and an activation effect
- d) Inhibition and disinhibition

Answer: c

Learning Objective: 2.2d Explain the purpose and function of the endocrine system.

Topic: 2.2d The Endocrine System

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

90. Sex-related hormones are produced during prenatal development and help determine whether the fetus will develop into a female or male. This kind of endocrine influence represents the \_\_\_\_\_ function of the endocrine system.

- a) activation
- b) actuarial
- c) organizational
- d) orthographic

Answer: c

Learning Objective: 2.2d Explain the purpose and function of the endocrine system.

Topic: 2.2d The Endocrine System

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 89    a = 2   b = 1   c = 89   d = 8    r = .41

91. Joel is interested in studying the effects of hormones on a person’s behavior. This interest came from reading high-profile cases in which athletes abused steroids and subsequently engaged in violent and aggressive behavior. Joel should probably explore getting an education in \_\_\_\_\_.

- a) forensic psychology
- b) neuropathic aggression
- c) developmental psychology

d) behavioral endocrinology

Answer: d

Learning Objective: 2.2d Explain the purpose and function of the endocrine system.

Topic: 2.2d The Endocrine System

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.2 Develop a working knowledge of psychology's content domains.

92. Which of the following terms best describes the relationship between the nervous and the endocrine systems?

- a) Interdependent
- b) Independent
- c) Dependent
- d) Unidirectional

Answer: a

Learning Objective: 2.2d Explain the purpose and function of the endocrine system.

Topic: 2.2d The Endocrine System

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

93. Following a stroke, Felipe struggled to form new memories. When he passed away, the doctor performing the autopsy noticed that much of Felipe's hippocampus was missing from his brain. The doctor concluded that the hippocampus is important in memory formation. This is an example of what technique for studying the brain?

- a) Brain stimulation
- b) Electroencephalogram
- c) MRI
- d) Case study

Answer: d

Learning Objective: 2.3a Describe the basic techniques for studying the brain.

Topic: 2.3a Studying the Brain

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

94. Brain mapping is done by \_\_\_\_\_.

- a) freezing the brain
- b) stimulating the brain
- c) damaging the brain
- d) slicing the brain

Answer: b

Learning Objective: 2.3a Describe the basic techniques for studying the brain.

Topic: 2.3a Studying the Brain



Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

95. Small metal disks are pasted onto Miranda's scalp and connected by wire to a machine that records her brainwaves. From this description, it is evident that Miranda's brain is being studied through the use of \_\_\_\_\_.

- a) computed tomography (CT)
- b) functional magnetic resonance imaging (fMRI)
- c) a microelectrode
- d) electroencephalography (EEG)

Answer: d

Learning Objective: 2.3a Describe the basic techniques for studying the brain.

Topic: 2.3a Studying the Brain

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

96. Which of the following types of neuroimaging technology is used to monitor brainwaves?

- a) Computed tomography (CT)
- b) Functional magnetic resonance imaging (fMRI)
- c) Microelectrode
- d) Electroencephalography (EEG)

Answer: d

Learning Objective: 2.3a Describe the basic techniques for studying the brain.

Topic: 2.3a Studying the Brain

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 31    a = 27   b = 19   c = 22   d = 31    r = .37

97. Which of the following is a brain-imaging method in which radioactive dye that attaches to glucose in the brain is injected into a person and a computer compiles a color-coded image of the activity of the person's brain?

- a) Electroencephalography (EEG)
- b) Computed tomography (CT)
- c) Positron emission tomography (PET)
- d) Functional magnetic resonance imaging (fMRI)

Answer: c

Learning Objective: 2.3a Describe the basic techniques for studying the brain.

Topic: 2.3a Studying the Brain

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 48    a = 25   b = 12   c = 48   d = 13    r = .37

98. Doctors believe that Sarka has a tumor in her brain, because she is having trouble speaking and remembering. Based on the doctors' prediction, which of the following techniques will they most likely use to make a diagnosis?

- a) Positron emission tomography (PET)
- b) Electroencephalography (EEG)
- c) Brain stimulation
- d) Computed tomography (CT)

Answer: d

Learning Objective: 2.3a Describe the basic techniques for studying the brain.

Topic: 2.3a Studying the Brain

Skill Level: Analyze It

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

99. Researchers want to determine what part of the brain is most involved when a person is reading. Which of the following techniques are they most likely to use to study this question?

- a) Brain stimulation
- b) Magnetic resonance imaging (MRI)
- c) Positron emission tomography (PET)
- d) Computed tomography (CT)

Answer: c

Learning Objective: 2.3a Describe the basic techniques for studying the brain.

Topic: 2.3a Studying the Brain

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

100. A brain-imaging method that takes computer-controlled X-rays to reveal "slices" of the brain is called \_\_\_\_\_.

- a) electroencephalography (EEG)
- b) magnetic resonance imaging (MRI)
- c) positron emission tomography (PET)
- d) computed tomography (CT)

Answer: d

Learning Objective: 2.3a Describe the basic techniques for studying the brain.

Topic: 2.3a Studying the Brain

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 30    a = 16   b = 42   c = 11   d = 30     $r = .30$

101. Ali is in the hospital and is about to undergo a brain-imaging process that involves taking many X-rays, aided by the use of a computer, to form a three-dimensional image. What type of imaging technique is being used?

- a) Electroencephalography (EEG)
- b) Magnetic resonance imaging (MRI)
- c) Positron-emission tomography (PET)
- d) Computed tomography (CT)

Answer: d

Learning Objective: 2.3a Describe the basic techniques for studying the brain.

Topic: 2.3a Studying the Brain

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 37    a = 18   b = 42   c = 4   d = 37     $r = .30$

102. A brain-imaging method that uses magnetic fields of the body to produce detailed images of the brain, with a high level of contrast, is called \_\_\_\_\_.

- a) electroencephalography (EEG)
- b) magnetic resonance imaging (MRI)
- c) positron emission tomography (PET)
- d) computed tomography (CT)

Answer: b

Learning Objective: 2.3a Describe the basic techniques for studying the brain.

Topic: 2.3a Studying the Brain

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 64    a = 19   b = 64   c = 7   d = 10     $r = .20$

% correct 81    a = 17   b = 81   c = 0   d = 2     $r = .29$

103. Rashad is in the hospital and is about to undergo a brain-imaging process that involves assessing changes in various “fields” in his brain so that a computer can create images of the internal details of his brain. Which of the following methods is to be used?

- a) Electroencephalography (EEG)
- b) Magnetic resonance imaging (MRI)
- c) Computed tomography (CT)
- d) Positron emission tomography (PET)

Answer: b

Learning Objective: 2.3a Describe the basic techniques for studying the brain.

Topic: 2.3a Studying the Brain

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

104. The hindbrain is one of \_\_\_\_\_ operationally distinct sections of the brain.
- a) two
  - b) three
  - c) four
  - d) five

Answer: b

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 57    a = 4   b = 57   c = 35   d = 4    r = .39

105. The medulla, pons, and cerebellum are all part of the \_\_\_\_\_.
- a) limbic system
  - b) corpus callosum
  - c) cerebral cortex
  - d) brainstem

Answer: d

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

106. Damage to the \_\_\_\_\_ will most likely result in death or the need to be placed on life-sustaining machines.
- a) reticular activating system
  - b) pons
  - c) medulla
  - d) cerebellum

Answer: c

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

107. An auto accident has rendered Chris's nervous system unable to send messages for him to balance his body when standing up. What part of Chris's brain has most likely been damaged?

- a) Pons
- b) Medulla
- c) Cerebellum
- d) Reticular formation

Answer: c

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 48    a = 10   b = 48   c = 37   d = 5    r = .22

108. Joel has been in an accident, and doctors have declared him to be in a coma because he is unable to respond to his surroundings. Unfortunately, the doctors cannot tell that he is actually aware of everything that is happening to him. Joel most likely has damaged his \_\_\_\_\_.

- a) hindbrain
- b) pons
- c) medulla
- d) forebrain

Answer: b

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 78    a = 10   b = 6   c = 78   d = 6    r = .36

109. A college student is having difficulty staying awake during the day and sleeping through the night. Her difficulties are most likely due to problems in the \_\_\_\_\_.

- a) hippocampus
- b) pons
- c) medulla
- d) cerebellum

Answer: b

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 44 a = 15 b = 44 c = 25 d = 16 r = .22

% correct 41 a = 31 b = 41 c = 12 d = 16 r = .47

110. Damage to this part of the brain can lead to ventral pontine syndrome, a condition sometimes called being “locked in.”

- a) Hippocampus
- b) Pons
- c) Medulla
- d) Cerebellum

Answer: b

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

111. Since Tony suffered a head injury in a car accident three months ago, he has not experienced dreams as he did in the past. He used to have vivid, active dreams. Which part of his brain related to dreaming was most likely affected by the car accident?

- a) Pons
- b) Cerebellum
- c) Cerebral cortex
- d) Pituitary gland

Answer: a

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 46 a = 46 b = 22 c = 32 d = 1 r = .40

112. Which part of the midbrain is made up of groups of receptors that control auditory and visual receptors, and is also a component of our basic emotional system?

- a) Basal ganglia
- b) Substantia nigra
- c) Putamen
- d) Tectum

Answer: d

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

113. Monique has been diagnosed with a specific psychological disorder. She researches her condition so that she can better understand it and learns that this particular illness has been linked to problems with the reticular formation in her midbrain. What diagnosis has Monique probably received?

- a) Attention-deficit hyperactivity disorder (ADHD)
- b) Major depressive disorder
- c) Generalized anxiety disorder
- d) Schizophrenia

Answer: a

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Apply What You Know

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

114. What is the main function of the reticular formation, which connects to the reticular activating system?

- a) To control thinking
- b) To regulate emotions
- c) To control levels of alertness
- d) To coordinate involuntary rapid fine-motor movements

Answer: c

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

115. A neuroanatomist destroyed a dog's reticular formation to determine its function. As a result, the dog most likely \_\_\_\_\_.

- a) could no longer hear
- b) could no longer see
- c) lapsed into a complete and irreversible coma
- d) became hyperalert and no longer slept normally

Answer: c

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Analyze It

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 36    a = 4   b = 21   c = 36   d = 39    r = .20

116. Which of the following is a group of several brain structures positioned in the center of the brain and involved in learning, emotion, memory, and addiction?

- a) Limbic system
- b) Cerebellum
- c) Cerebral cortex
- d) Cerebrum

Answer: a

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 54    a = 54   b = 14   c = 20   d = 12    r = .29

% correct 50    a = 50   b = 21   c = 22   d = 7    r = .44

117. The structures of the limbic system play an important role in \_\_\_\_\_ and \_\_\_\_\_.

- a) heart rate; breathing
- b) breathing; decision making
- c) memory; emotion
- d) spatial tasks; sequential tasks

Answer: c

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 58    a = 28   b = 5   c = 58   d = 8    r = .30

% correct 44    a = 26   b = 22   c = 44   d = 7    r = .40

118. If the limbic system was destroyed, which of the following pairs of structures would be damaged?

- a) Cerebellum and corpus callosum
- b) Cerebellum and amygdala



- c) Amygdala and hippocampus
- d) Hippocampus and corpus callosum

Answer: c

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 69    a = 18   b = 8   c = 69   d = 3     $r = .39$

119. Which part of the brain acts as a relay station for incoming sensory information?

- a) Hypothalamus
- b) Thalamus
- c) Cerebellum
- d) Pituitary gland

Answer: b

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 48    a = 19   b = 48   c = 25   d = 8     $r = .53$

% correct 48    a = 22   b = 48   c = 22   d = 8     $r = .48$

120. Jason has recently started running and is training for a 5K race. He notices that when he starts running, he immediately feels overheated, but within a minute or so he begins sweating, which reduces his core body temperature. Which part of the brain is responsible for this function of temperature regulation?

- a) Hypothalamus
- b) Hippocampus
- c) Cerebellum
- d) Tectum

Answer: a

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Analyze It

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

121. The \_\_\_\_\_ is the part of the brain responsible for the formation of new memories.

- a) hippocampus
- b) hypothalamus
- c) fornix
- d) amygdala

Answer: a

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 59    a = 59   b = 19   c = 0   d = 22     $r = .45$

122. Rats that have a damaged \_\_\_\_\_ would probably show little or no fear when placed next to a cat.

- a) hippocampus
- b) hypothalamus
- c) fornix
- d) amygdala

Answer: d

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 49    a = 27   b = 23   c = 1   d = 49     $r = .52$

123. Emily was in an automobile accident and suffered an injury to her brain that resulted in her having difficulty controlling her left arm. What part of Emily's brain was injured?

- a) Left motor cortex
- b) Right motor cortex
- c) Corpus callosum
- d) Somatosensory cortex

Answer: b

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 82    a = 0   b = 82   c = 5   d = 11     $r = .36$

124. Which of the following lobes are involved in planning, creativity, and movement?

- a) Temporal lobes
- b) Parietal lobes
- c) Frontal lobes
- d) Occipital lobes

Answer: c

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

125. The motor cortex is located in the \_\_\_\_\_ lobe of the brain.

- a) frontal
- b) occipital
- c) parietal
- d) temporal

Answer: a

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 74    a = 74   b = 6   c = 21   d = 9    r = .38

126. Kai is a soccer player. The motor impulses he needs to kick the ball originate in which lobe of the cerebral cortex?

- a) Temporal
- b) Parietal
- c) Occipital
- d) Frontal

Answer: d

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Apply What You Know

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 55    a = 10   b = 33   c = 2   d = 55    r = .30

127. Darla was in an automobile accident that resulted in an injury to her brain. Her sense of

touch has been affected. Which lobe of her cerebral cortex is the most likely site of the damage?

- a) Frontal
- b) Temporal
- c) Occipital
- d) Parietal

Answer: d

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 65    a = 20   b = 11   c = 4   d = 65     $r = .30$

% correct 62    a = 18   b = 16   c = 5   d = 62     $r = .32$

128. The somatosensory cortex is located in the \_\_\_\_\_ lobe of the brain.

- a) frontal
- b) occipital
- c) parietal
- d) temporal

Answer: c

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 47    a = 32   b = 10   c = 47   d = 11     $r = .37$

129. Jerry was in a terrible tractor accident, and after several days in the hospital, doctors decided that his left leg had to be amputated. Six months later, at home, Jerry often feels pain and itching in his left leg, even though it has been removed. This is referred to as \_\_\_\_\_ pain.

- a) post-amputation traumatic
- b) hysterical extremity
- c) neurogenic
- d) phantom limb

Answer: d

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

130. Which of the following regions of the brain contain the auditory cortex?

- a) Temporal lobes
- b) Parietal lobes
- c) Frontal lobes
- d) Occipital lobes

Answer: a

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 63    a = 63   b = 7   c = 22   d = 7    r = .44

131. Layla has difficulty recognizing spoken words, sometimes experiences memory problems, and occasionally has difficulty controlling her emotions. Which part of the brain is probably experiencing a problem that leads to this combination of symptoms?

- a) Prefrontal cortex
- b) Anterior parietal lobe
- c) Right occipital lobe
- d) Left temporal lobe

Answer: d

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Analyze It

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

132. Which of the following regions contains the primary visual cortex?

- a) Occipital lobe
- b) Parietal lobe
- c) Temporal lobe
- d) Frontal lobe

Answer: a

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 82 a = 82 b = 4 c = 14 d = 0 r = .47

133. The part of the occipital lobe that is responsible for receiving visual information from the eyes by way of the optic nerves is called the \_\_\_\_\_ cortex.

- a) primary visual
- b) somatosensory
- c) auditory
- d) visual association

Answer: a

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

134. John has decided to learn how to wrestle. His first day at practice, a seasoned wrestler slams the back of his head to the mat. John is shaken and reports to the trainer that he “saw stars” after he hit his head. John “saw stars” because his \_\_\_\_\_ was temporarily affected as a result of the slam.

- a) corpus callosum
- b) occipital lobe
- c) parietal lobes
- d) somatosensory cortex

Answer: b

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 92 a = 2 b = 92 c = 3 d = 3 r = .34

135. A brain tumor’s growth has caused Dick’s vision to suffer. Which lobe of the brain is being affected by the tumor’s growth?

- a) Frontal
- b) Occipital
- c) Parietal
- d) Temporal

Answer: b

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Apply What You Know

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 91 a = 2 b = 91 c = 4 d = 3 r = .23

136. The cortex is divided into two sections referred to as \_\_\_\_\_.

- a) cerebral hemispheres
- b) cerebellums
- c) corpus callosums
- d) neurotransmitters

Answer: a

Learning Objective: 2.3c Describe the two hemispheres of the brain.

Topic: 2.3c The Cerebral Hemispheres

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 91 a = 91 b = 3 c = 5 d = 0 r = .29

137. The thick band of neurons that connects the right and left cerebral hemispheres is called the \_\_\_\_\_.

- a) cortex
- b) cerebrum
- c) corpus callosum
- d) cerebellum

Answer: c

Learning Objective: 2.3c Describe the two hemispheres of the brain.

Topic: 2.3c The Cerebral Hemispheres

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 90 a = 3 b = 1 c = 90 d = 5 r = .51

% correct 81 a = 0 b = 4 c = 81 d = 15 r = .54

138. Since the removal of a tumor from the left side of her brain, Sharon has recovered well. However, some of her former abilities are now limited. Which of the following abilities has most likely been affected?

- a) Coordinated walking movements
- b) Solving algebra equations
- c) Assembling puzzles
- d) Recognizing objects that she sees

Answer: b

Learning Objective: 2.3c Describe the two hemispheres of the brain.

Topic: 2.3c The Cerebral Hemispheres

Skill Level: Apply What You Know

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 68 a = 14 b = 68 c = 10 d = 8 r = .28

139. Which hemisphere of the cerebral cortex is better at math, logical reasoning, and language tasks?

- a) Front
- b) Rear
- c) Left
- d) Right

Answer: c

Learning Objective: 2.3c Describe the two hemispheres of the brain.

Topic: 2.3c The Cerebral Hemispheres

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

140. Malik has developed an illness that afflicts one specific area of his cerebral cortex. The primary symptom is that he has tremendous difficulty recognizing people's faces. Which area of his cerebral cortex has been affected?

- a) Parietal lobe
- b) Temporal lobe
- c) Left hemisphere
- d) Right hemisphere

Answer: d

Learning Objective: 2.3c Describe the two hemispheres of the brain.

Topic: 2.3c The Cerebral Hemispheres

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

141. The left cerebral hemisphere primarily controls \_\_\_\_\_.

- a) the right side of the body
- b) the left side of the body
- c) all motor functions
- d) spatial reasoning

Answer: a

Learning Objective: 2.3c Describe the two hemispheres of the brain.

Topic: 2.3c The Cerebral Hemispheres

Skill Level: Remember the Facts

Difficulty Level: Easy



APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 91 a = 91 b = 2 c = 4 d = 3 r = .35

142. Assume that you are testing a split-brain human subject whose language center is in his left hemisphere. If you place a house key into his left hand, he will \_\_\_\_\_.

- a) not be able to later select the object he was holding from a group of various objects
- b) not be able to tell you what object he is presently holding
- c) immediately be able to tell you what he is holding
- d) be able to tell you what he is presently holding if allowed to think about it for several seconds

Answer: b

Learning Objective: 2.3c Describe the two hemispheres of the brain.

Topic: 2.3c The Cerebral Hemispheres

Skill Level: Analyze It

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

% correct 80 a = 5 b = 80 c = 6 d = 8 r = .24

143. A split-brain patient is asked to stare at a spot on a screen. When a picture of an object is shown to the left of the spot, the patient can \_\_\_\_\_.

- a) identify the object verbally and pick it out of a group of hidden objects using her right hand
- b) identify the object verbally and pick it out of a group of hidden objects using her left hand
- c) pick the object out of a group of hidden objects using her left hand, and can identify it by touch
- d) pick the object out of a group of hidden objects using her right hand, but cannot identify it verbally

Answer: c

Learning Objective: 2.3c Describe the two hemispheres of the brain.

Topic: 2.3c The Cerebral Hemispheres

Skill Level: Analyze It

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

144. Split-brain surgery is often done to treat \_\_\_\_\_.

- a) tumors
- b) seizures
- c) strokes
- d) infections in the brain

Answer: b

Learning Objective: 2.3c Describe the two hemispheres of the brain.

Topic: 2.3c The Cerebral Hemispheres

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

145. The ability of the brain to change in response to experience or damage is called \_\_\_\_\_.

- a) neural plasmosis
- b)reticular formation
- c) neurogenesis
- d) neuroplasticity

Answer: d

Learning Objective: 2.3d Explain neuroplasticity and neurogenesis.

Topic: 2.3d Neuroplasticity and Neurogenesis

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

146. In regard to the brain, the term *plasticity* refers to \_\_\_\_\_.

- a) being easily broken or “cracked”
- b) the ability to adapt to new conditions
- c) level of complexity
- d) brittleness or rigidity

Answer: b

Learning Objective: 2.3d Explain neuroplasticity and neurogenesis.

Topic: 2.3d Neuroplasticity and Neurogenesis

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

147. Jack suffered a brain injury as a result of hitting his head while waterskiing. One of the problems that developed was that Jack could not pronounce certain words correctly for a long period of time; now that he has had extensive speech therapy, he can speak as he did before his accident. This is an example of the brain’s \_\_\_\_\_, which allows the structure and function of his brain cells to change to adjust to the trauma.

- a) adaptology
- b) stagnation
- c) neuroplasticity
- d) reflex arc

Answer: c

Learning Objective: 2.3d Explain neuroplasticity and neurogenesis.

Topic: 2.3d Neuroplasticity and Neurogenesis

Skill Level: Apply What You Know

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

148. Learning something new is represented by neural connections getting \_\_\_\_\_ in the brain.

- a) weaker
- b) rearranged
- c) stronger
- d) relocated

Answer: c

Learning Objective: 2.3d Explain neuroplasticity and neurogenesis.

Topic: 2.3d Neuroplasticity and Neurogenesis

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

149. \_\_\_\_\_ is the creation of new neurons in the adult brain.

- a) Neurogenesis
- b) Neural plasticity
- c) Long-term potentiation
- d) Synaptogenesis

Answer: a

Learning Objective: 2.3d Explain neuroplasticity and neurogenesis.

Topic: 2.3d Neuroplasticity and Neurogenesis

Skill Level: Remember the Facts

Difficulty Level: Easy

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

150. Which of the following is necessary for new cells in the brain to survive?

- a) They must be able to build connections with other neurons.
- b) Appropriate physical therapy needs to be prescribed.
- c) The person must practice the behavior that is associated with those new cells.
- d) They must be wrapped in glial cells.

Answer: a

Learning Objective: 2.3d Explain neuroplasticity and neurogenesis.

Topic: 2.3d Neuroplasticity and Neurogenesis

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

151. Gazzaniga and Sperry conducted research on epileptics who needed a specific surgery to hopefully help reduce the number of seizures they were having. This surgical procedure is called the \_\_\_\_\_.

- a) left-brain procedure
- b) right-brain procedure
- c) split-brain procedure
- d) midbrain procedure

Answer: c

Learning Objective: 2.4a: Describe how psychology may be applied to interpret and explain new behavioral phenomena.

Topic: 2.4 Studies That Changed Psychology: Then and Now

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.2 Develop a working knowledge of psychology's content domains.

152. In the study conducted by Gazzaniga and Sperry, when patients were asked to report on information presented only to the right hemisphere, what happened?

- a) Patients were able to accurately report what was presented to their right hemisphere
- b) Patients were able to describe what was presented to their right hemisphere, but they could not name any of the objects
- c) Patients were completely mute
- d) Patients rambled on with nonsense sentences

Answer: c

Learning Objective: 2.4a: Describe how psychology may be applied to interpret and explain new behavioral phenomena.

Topic: 2.4 Studies That Changed Psychology: Then and Now

Skill Level: Understand the Concepts

Difficulty Level: Moderate

APA Learning Objective: 1.2 Develop a working knowledge of psychology's content domains.

153. What were the conclusions of the Gazzaniga and Sperry study?

- a) All people are either left-brained or right-brained.
- b) The brain can operate as a whole, but function of the independent hemispheres can also be observed.
- c) Once the corpus callosum is severed, the person will be unable to do anything beyond vegetative functioning.
- d) The hemispheres can act independently, demonstrating full function on each side of the brain.

Answer: b

Learning Objective: 2.4a: Describe how psychology may be applied to interpret and explain new behavioral phenomena.

Topic: 2.4 Studies That Changed Psychology: Then and Now

Skill Level: Analyze It

Difficulty Level: Difficult

APA Learning Objective: 1.2 Develop a working knowledge of psychology's content domains.

154. In the Gazzaniga and Sperry study, what was the independent variable?

- a) Verbally reporting what they had been asked to do
- b) Accuracy at picking items out of a bag

- c) Whether participants were presented information visually, through hearing, or by feeling
- d) Whether or not participants had received the split-brain surgery

Answer: c

Learning Objective: 2.4b Demonstrate psychology information literacy through an understanding of research methods and design.

Topic: 2.4 Studies That Changed Psychology: Then and Now

Skill Level: Analyze It

Difficulty Level: Difficult

APA Learning Objective: 1.2 Develop a working knowledge of psychology's content domains.

## ESSAY

155. Compare and contrast the reductionist and holistic models of studying human behavior.

Answer: Reductionism is the breaking down of complex phenomena into simpler components. It begins with a broad explanation of society and culture and then is brought down into a narrower explanation of mental systems and behavior. Reduction to the most basic level of neurobehavioral processes should be achieved. While this method is very detailed-oriented and easily gets down to the very basic elements of life, it can be criticized for allowing a lot of other information to be overlooked by the forced reduction of ideas. Holistic models prefer to look at the interaction of all of the elements of the individual and recognize that most behaviors are influenced by multiple factors. An example of this is the biopsychosocial model. This approach can be criticized, though, because through it we do not learn about the most basic of elements that contribute to behavior.

Learning Objective: 2.1a Describe the reductionist and holistic approaches to studying behavior.

Topic: 2.1a Reductionism and Holistic Models

Skill Level: Analyze It

Difficulty Level: Difficult

APA Learning Objective: 1.2 Develop a working knowledge of psychology's content domains.

156. Critique the biopsychosocial model for explaining behavior. Why might it be helpful and more accurate than other models, or why might it overcomplicate the evaluation of behavior? In your critique, include a definition of the model and provide examples of each of its elements.

Answer: Proposed by George Engel, this model suggested that you could only understand behavior if you considered the biological, psychological, and social aspects involved in the behavior. He believed that each of these three variables was an entire system operating within an even larger system. While the model provides a powerful framework for explaining behavior, it can be very difficult to study something that is so broad and, by its character, allows more than one variable to change at a time.

Learning Objective: 2.1a Describe the reductionist and holistic approaches to studying behavior.

Topic: 2.1a Reductionism and Holistic Models

Skill Level: Analyze It

Difficulty Level: Difficult

APA Learning Objective: 1.2 Develop a working knowledge of psychology's content domains.

157. Analyze the four main parts of the human neuron by explaining how they are related in structure and function. Clearly identify the role that each plays in the transmission of neural communication.

Answer: The neuron consists of dendrites, a cell body, an axon, and axon terminals. The dendrites receive information from other cells. They increase the likelihood that cells will connect with them by branching out like the roots of a tree. The cell body contains the DNA for the cell. At the juncture between the cell body and the axon, the decision is made whether or not to fire an action potential. The axon is responsible for carrying an action potential from the cell body to the axon terminals, in preparation for sending a message on to the next cell. The axon can be myelinated or non-myelinated, which adjusts the speed that cell can use to transfer a new message; myelinated cells are the fastest. The axon terminals will connect with other cells' dendrites and cell bodies and transmit a chemical message to the next cell. While waiting for the action potential to come along, they store vesicles with neurotransmitter.

Learning Objective: 2.2a Describe the structure and function of neurons.

Topic: 2.2a Neurons

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

158. Identify the primary neurotransmitters discussed in your text. Distinguish between them based on their proposed functions. Propose one potential impact if a person has particularly low levels of each neurotransmitter.

Answer: Acetylcholine is a neurotransmitter associated with memory function, arousal, and movement. Therefore, someone struggling with too little acetylcholine would have difficulty in forming new memories, making movements, and maintaining normal levels of arousal. Dopamine is a neurotransmitter associated with pleasure sensation and appetite suppression. Someone low in dopamine might overeat and have very little motivation to seek something pleasurable. Endorphins are critical chemicals for providing pain relief. Someone low on endorphins would experience more pain than normal. Glutamate is a neurotransmitter responsible for learning and memory enhancement. Obviously, if someone is low in glutamate, learning and memory would be reduced. Norepinephrine is a neurotransmitter implicated in arousal, mood, and appetite suppression. Someone with too little norepinephrine could suffer from low arousal, low mood, and decreased appetite suppression. Serotonin is a neurotransmitter that has been shown to play a role in mood, sleep, and appetite. Low levels of serotonin would lead to low mood, a lack of sleep, and a change in appetite. Lastly, GABA is indicated in sleep, anxiety, and tension. Low levels of GABA might lead to sleep disturbance, anxiety, and increased tension.

Learning Objective: 2.2b Explain how neural messages are transmitted.

Topic: 2.2b Neuronal Transmission

Skill Level: Apply What You Know

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

159. Compare and contrast the roles of the various divisions of the nervous system.

Answer: The nervous system is composed of the central nervous system and the peripheral nervous system. The central nervous system contains the brain and the spinal cord, and the peripheral nervous system contains all of the nerves outside of the brain and the spinal cord that interact in the body. Therefore, the central nervous system oversees incoming sensory information and creates a response to that information in the form of a behavior. The peripheral nervous system is further divided into the autonomic and somatic nervous systems. The somatic nervous system is made up of nerves over which you have conscious control and that help control voluntary movement. The autonomic nervous system controls involuntary bodily functions such as sweating, digestion, and organ secretions. The autonomic nervous system is further divided into two parts. One is the sympathetic nervous system, which oversees the fight-or-flight preparations of the body, and the other is the parasympathetic nervous system, which is the calming system that returns the body to its normal state after sympathetic nervous system arousal.

Learning Objective: 2.2c Identify the major divisions of the nervous system.

Topic: 2.2c Divisions of the Nervous System

Skill Level: Apply What You Know

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

160. Distinguish between the organizational and activational functions of the endocrine system.

Answer: The organizational role of the endocrine system occurs when hormones are released during gestation and assist in signaling the fetus to develop either male or female structures. During gestation, the right hormones from the endocrine system must be released to allow the fetus to develop female or male genitalia, as indicated by the sex chromosomes. Activational effects temporarily influence the body and behavior, like when we need to respond to a stressful situation and the adrenal glands release adrenaline.

Learning Objective: 2.2d Explain the purpose and function of the endocrine system.

Topic: 2.2d The Endocrine System

Skill Level: Apply What You Know

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

161. Compare and contrast the function and implementation of three methods for viewing the brain and its activity.

Answer: Students will compare three of the following:

EEG: This is a measure of electrical activity produced by neurons when they send their messages to other neurons. It involves placing electrodes on the surface of the person's head, where brainwaves can be recorded. It is a method to measure function in the brain.

PET: The PET scan involves injecting the individual with a dye that is radioactive and attaches to glucose. It then reflects areas of the brain where there is increased activity as the glucose is taken up by brain cells that need the energy. It is a method to measure function in the brain

fMRI: This uses the MRI technology by showing differing levels of electrical activity in the brain of patients while they are performing specific tasks. This technique is unique because it also gives you a picture of the brain, revealing its structure. Therefore, it is a method that can be used to observe both structure and function.

CT: A CT scan combines the use of X-rays and computers to generate a three-dimensional picture of the brain. It can be used to look for abnormalities in the structure of the brain.

MRI: A magnetic resonance image generates a three-dimensional computer image of the brain but provides better contrast and detail than the CT. The MRI is very good at showing the internal detail of the brain.

Learning Objective: 2.3a Describe the basic techniques for studying the brain.

Topic: 2.3a Studying the Brain

Skill Level: Analyze It

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

162. Distinguish between the primary structures in the hindbrain and give a function for each. Describe the basic role of the hindbrain in overall brain function.

Answer: The medulla is a primary structure in the hindbrain that oversees functions like breathing, digesting, and the beating of the heart. The cerebellum is the small brain that comes off the back of the brain and is important in coordinating muscle movements, balance, posture, and equilibrium; it has also been shown to play a part in memory for language, emotions, and some higher-order human functions such as decision-making. The pons sits just above the medulla and serves as an area where sensory signals cross from one side of the body to the other side of the brain. It plays an important role in consciousness, sleep, and dreaming. The hindbrain, then, is critical for basic functions of the body, including breathing, heartbeat, organizing sleep and consciousness, and coordinating motor responses that assist with balance and posture.

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

163. Compare and contrast the location of the lobes of the brain and their primary functions.



Answer: The frontal lobes are called “frontal” because of their placement. They contain the motor cortex and are critical in motor movement. They also play a critical role in personality and complex thinking. The frontal lobes are the last to develop and are capable of some of the most complex functions of the brain, like higher-order thinking and decision making. The parietal lobes lie just behind the frontal lobes, on the top of the brain. They contain the somatosensory cortex and are critical in bringing in the sense of touch from our body. They assist in guiding the information that comes in from the senses to the correct area in the brain for decoding. Once the information is decoded, it is brought back together and assimilated as one piece of information. The temporal lobes lie just inside your ears. They contain important structures for language, memory, and emotion. They are critical in helping you to produce and understand speech, along with bringing in all of your auditory messages and decoding them for interpretation. The occipital lobes lie at the back of the brain, toward the bottom. They are responsible for our sense of vision. Information arrives in the occipital lobe from the eyes. Once there, parts of your visual experience are sent off to be identified by form, shape, color, etc. These various characteristics are then brought back together to form a full picture.

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Topic: 2.3b Brain Structures

Skill Level: Apply What You Know

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

164. Compare and contrast the right and left cerebral hemispheres and their function?

Answer: The two hemispheres of the brain look very similar and are connected via the corpus callosum. This structure assists the hemispheres in performing acts that require both hemispheres. The majority of tasks require both hemispheres. However, the brain does demonstrate some level of specialization in each of the hemispheres. The left hemisphere appears to be better at math, language, and logical reasoning. The right side plays a larger role in recognizing faces, using your imagination, and drawing a picture.

Learning Objective: 2.3c Describe the two hemispheres of the brain.

Topic: 2.3c The Cerebral Hemispheres

Skill Level: Analyze It

Difficulty Level: Moderate

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

165. Compare and contrast the concepts of neuroplasticity and neurogenesis. Explain why they are critical processes in the brain.

Answer: Neuroplasticity is the ability of the brain to change itself in response to experience or damage. Therefore, it mostly occurs in existing brain tissue and involves the strengthening or weakening of connections between neurons. However, neuroplasticity can result in the growth of new neurons. Neuroplasticity plays a critical role in recovery from brain injury or

disease. *Neurogenesis* means “birth of neurons.” It is used to describe the thousands of new neurons formed in the brain each day. For these new cells to survive, they must make connections with other cells. One day, our knowledge of neurogenesis may help us bring new treatment to those who suffer from brain injuries or disease. So neurogenesis is the birth of new cells, while neuroplasticity mostly consists of changes in existing cells.

Learning Objective: 2.3d Explain neuroplasticity and neurogenesis.

Topic: 2.3d Neuroplasticity and Neurogenesis

Skill Level: Analyze It

Difficulty Level: Difficult

APA Learning Objective: 1.1 Describe key concepts, principles, and overarching themes in psychology.

## REVEL QUIZ QUESTIONS

*The following questions appear at the end of each module and at the end of the chapter in Revel for Psychology 2e.*

### End of Module Quiz 2.1: Biological Models of Behavior

#### EOM Q2.1.1

Which model of behavior focuses on the interaction between biological, psychological, social, and cultural variables?

- a) Reductionist

CONSIDER THIS: This model was put forth by psychiatrist George Engel, who believed that the mind and body were connected and to promote health, one must consider the whole person. LO 2.1a Describe the reductionist and holistic approaches to studying behavior.

- b) Levels of analysis

CONSIDER THIS: This model was put forth by psychiatrist George Engel, who believed that the mind and body were connected and to promote health, one must consider the whole person. LO 2.1a Describe the reductionist and holistic approaches to studying behavior.

- c) Biopsychosocial

- d) Evolutionary

CONSIDER THIS: This model was put forth by psychiatrist George Engel, who believed that the mind and body were connected and to promote health, one must consider the whole person. LO 2.1a Describe the reductionist and holistic approaches to studying behavior.

Answer: c

Learning Objective: 2.1a Describe the reductionist and holistic approaches to studying behavior.

Module: 2.1: Biological Models of Behavior

Difficulty Level: Easy

Skill Level: Remember the Facts

#### EOM Q2.1.2

What is the lowest level of explanation for a behavior according to a reductionist approach?

- a) Neurobehavioral processes

- b) Mental systems

CONSIDER THIS: Reductionists want to reduce explanations to their most fundamental components. LO 2.1a Describe the reductionist and holistic approaches to studying behavior.

- c) Culture

CONSIDER THIS: Reductionists want to reduce explanations to their most fundamental components. LO 2.1a Describe the reductionist and holistic approaches to studying behavior.

- d) Society

CONSIDER THIS: Reductionists want to reduce explanations to their most fundamental

components. LO 2.1a Describe the reductionist and holistic approaches to studying behavior.

Answer: a

Learning Objective: 2.1a Describe the reductionist and holistic approaches to studying behavior.

Module: 2.1: Biological Models of Behavior

Difficulty Level: Easy

Skill Level: Understand the Concepts

### EOM Q2.1.3

Which statement describes the role of the epigenome?

- a) It is the physical structure that houses the human genome.  
CONSIDER THIS: Epigenome literally means "above the genome" and can control the genes like a dimmer switch, turning their influence higher or lower. LO 2.1b Define *epigenetics* and describe how the *epigenome* acts as a mediator between genetics and the environment.
- b) It is the boss that controls gene activation.
- c) It is the molecule that encodes each person's genetic blueprint.  
CONSIDER THIS: Epigenome literally means "above the genome" and can control the genes like a dimmer switch, turning their influence higher or lower. LO 2.1b Define epigenetics and describe how the *epigenome* acts as a mediator between genetics and the environment.
- d) Its job is to combine chromosomes during conception.  
CONSIDER THIS: Epigenome literally means "above the genome" and can control the genes like a dimmer switch, turning their influence higher or lower. LO 2.1b Define epigenetics and describe how the *epigenome* acts as a mediator between genetics and the environment.

Answer: b

Learning Objective: 2.1b Define epigenetics and describe how the epigenome acts as a mediator between genetics and the environment.

Module: 2.1: Biological Models of Behavior

Difficulty Level: Easy

Skill Level: Remember the Facts

### EOM Q2.1.4

According to evolutionary models, what is the driving force behind all human and animal behaviors?

- a) Independence  
CONSIDER THIS: Evolutionary models focus primarily on behaviors that are adaptive and shared by all humans. LO 2.1c Understand the concepts of evolution and natural selection.
- b) Survival
- c) Aggression  
CONSIDER THIS: Evolutionary models focus primarily on behaviors that are adaptive and shared by all humans. LO 2.1c Understand the concepts of evolution and natural selection.

- d) Social connection

CONSIDER THIS: Evolutionary models focus primarily on behaviors that are adaptive and shared by all humans. LO 2.1c Understand the concepts of evolution and natural selection.

Answer: b

Learning Objective: 2.1c Understand the concepts of evolution and natural selection.

Module: 2.1: Biological Models of Behavior

Difficulty Level: Easy

Skill Level: Understand the Concepts

#### EOM Q2.1.5

All of the following factors are important in understanding natural selection EXCEPT \_\_\_\_\_.

- a) Variation

CONSIDER THIS: In evolutionary theory, inherited traits serve to help a species survive and reproduce. LO 2.1c Understand the concepts of evolution and natural selection.

- b) Inheritance

CONSIDER THIS: In evolutionary theory, inherited traits serve to help a species survive and reproduce. LO 2.1c Understand the concepts of evolution and natural selection.

- c) Survival

CONSIDER THIS: In evolutionary theory, inherited traits serve to help a species survive and reproduce. LO 2.1c Understand the concepts of evolution and natural selection.

- d) free will

Answer: d

Learning Objective: 2.1c Understand the concepts of evolution and natural selection.

Module: 2.1: Biological Models of Behavior

Difficulty Level: Easy

Skill Level: Understand the Concepts

## End of Module Quiz 2.2: The Nervous and Endocrine Systems

#### EOM Q2.2.1

Which part of the neuron houses the DNA for the cell?

- a) Dendrite

CONSIDER THIS: This is the largest part of the cell, which is capable of coordinating the information processing for the cell. LO 2.2a Describe the structure and function of neurons.

- b) Soma

- c) Axon

CONSIDER THIS: This is the largest part of the cell, which is capable of coordinating the information processing for the cell. LO 2.2a Describe the structure and function of neurons.

- d) Axon terminal

CONSIDER THIS: This is the largest part of the cell, which is capable of coordinating the information processing for the cell. LO 2.2a Describe the structure and function of neurons.

Answer: b

Learning Objective: 2.2a Describe the structure and function of neurons.

Module: 2.2: The Nervous and Endocrine Systems

Difficulty Level: Easy

Skill Level: Remember the Facts

#### EOM Q2.2.2

Like a lock and key, neurotransmitters attach themselves to \_\_\_\_\_ in the brain.

- a) receptor sites
- b) glial cells

CONSIDER THIS: If the neurotransmitter molecule is able to open the lock, its message is communicated. LO 2.2a Describe the structure and function of neurons.

- c) Receivers

CONSIDER THIS: If the neurotransmitter molecule is able to open the lock, its message is communicated. LO 2.2a Describe the structure and function of neurons.

- d) safe cells

CONSIDER THIS: If the neurotransmitter molecule is able to open the lock, its message is communicated. LO 2.2a Describe the structure and function of neurons.

Answer: a

Learning Objective: 2.2a Describe the structure and function of neurons.

Module: 2.2: The Nervous and Endocrine Systems

Difficulty Level: Easy

Skill Level: Understand the Concepts

#### EOM Q2.2.3

Which important cells in the brain were originally thought to be only helper cells to neurons?

- a) Mirror neurons

CONSIDER THIS: These cells, which make up 90% of the cells in the brain, actually come in several types and serve important functions beyond assisting neurons. LO 2.2b Explain how neural messages are transmitted.

- b) Glial cells
- c) Interneurons

CONSIDER THIS: These cells, which make up 90% of the cells in the brain, actually come in several types and serve important functions beyond assisting neurons. LO 2.2b Explain how neural messages are transmitted.

- d) Somas

CONSIDER THIS: These cells, which make up 90% of the cells in the brain, actually come in several types and serve important functions beyond assisting neurons. LO 2.2b Explain how neural messages are transmitted.

Answer: b

Learning Objective: 2.2b Explain how neural messages are transmitted.

Module: 2.2: The Nervous and Endocrine Systems

Difficulty Level: Easy

Skill Level: Understand the Concepts

#### EOM Q2.2.4

Which division of the nervous system is referred to as our "fight-or-flight" system?

- a) Central nervous system  
CONSIDER THIS: This is the pathway of nerve systems between the central nervous system and the muscles and organs in the body. LO 2.2c Identify the major divisions of the nervous system.
- b) Peripheral nervous system  
CONSIDER THIS: This is the pathway of nerve systems between the central nervous system and the muscles and organs in the body. LO 2.2c Identify the major divisions of the nervous system.
- c) Somatic nervous system  
CONSIDER THIS: This is the pathway of nerve systems between the central nervous system and the muscles and organs in the body. LO 2.2c Identify the major divisions of the nervous system.
- d) Sympathetic nervous system

Answer: d

Learning Objective: 2.2c Identify the major divisions of the nervous system.

Module: 2.2: The Nervous and Endocrine Systems

Difficulty Level: Easy

Skill Level: Remember the Facts

EOM Q2.2.5

The chief hormonal system in the body is called the \_\_\_\_\_.

- a) sympathetic system  
CONSIDER THIS: This system of hormone-producing glands can trigger hormonal messages just as your brain sends electrical messages. LO 2.2d Explain the purpose and function of the endocrine system.
- b) parasympathetic system  
CONSIDER THIS: This system of hormone-producing glands can trigger hormonal messages just as your brain sends electrical messages. LO 2.2d Explain the purpose and function of the endocrine system.
- c) endocrine system
- d) nervous system  
CONSIDER THIS: This system of hormone-producing glands can trigger hormonal messages just as your brain sends electrical messages. LO 2.2d Explain the purpose and function of the endocrine system.

Answer: c

Learning Objective: 2.2d Explain the purpose and function of the endocrine system.

Module: 2.2: The Nervous and Endocrine Systems

Difficulty Level: Easy

Skill Level: Understand the Concepts

## End of Module Quiz 2.3: The Brain

EOM Q2.3.1

If a team of psychologists wanted to see whether brain wave patterns change during a daydream, which imaging technique should they use?

- a) EEG
- b) PET Scan  
CONSIDER THIS: This machine measures the electrical activity produced by neurons as they fire their messages. LO 2.3a Describe the basic techniques for studying the brain.
- c) CT Scan  
CONSIDER THIS: This machine measures the electrical activity produced by neurons as they fire their messages. LO 2.3a Describe the basic techniques for studying the brain.
- d) MRI  
CONSIDER THIS: This machine measures the electrical activity produced by neurons as they fire their messages. LO 2.3a Describe the basic techniques for studying the brain.

Answer: a

Learning Objective: 2.3a Describe the basic techniques for studying the brain.

Module: 2.3: The Brain

Difficulty Level: Easy

Skill Level: Understand the Concepts

#### EOM Q2.3.2

Which hindbrain structure plays an important role in coordinating posture and balance?

- a) Medulla  
CONSIDER THIS: This structure also plays a part in memory for language, emotions, and higher-level functions such as decision making. LO 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.
- b) Cerebellum
- c) Pons  
CONSIDER THIS: This structure also plays a part in memory for language, emotions, and higher-level functions such as decision making. LO 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.
- d) Reticular formation  
CONSIDER THIS: This structure also plays a part in memory for language, emotions, and higher-level functions such as decision making. LO 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Answer: b

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Module: 2.3: The Brain

Difficulty Level: Easy

Skill Level: Understand the Concepts

#### EOM Q2.3.3

Which statement describes the experience of split-brain patients?

- a) The two hemispheres can no longer directly communicate with each other.
- b) The communication between the two hemispheres is greatly improved.  
CONSIDER THIS: This loss of hemispheric connection can sometimes result, for



example, in antagonistic behavior between hands. LO 2.3c Describe the two hemispheres of the brain.

- c) They now live with only one functioning hemisphere.  
CONSIDER THIS: This loss of hemispheric connection can sometimes result, for example, in antagonistic behavior between hands. LO 2.3c Describe the two hemispheres of the brain.
- d) They have had one hemisphere removed.  
CONSIDER THIS: This loss of hemispheric connection can sometimes result, for example, in antagonistic behavior between hands. LO 2.3c Describe the two hemispheres of the brain.

Answer: a

Learning Objective: 2.3c Describe the two hemispheres of the brain.

Module: 2.3: The Brain

Difficulty Level: Easy

Skill Level: Understand the Concepts

#### EOM Q2.3.4

Which brain structure acts as an information superhighway sending messages back and forth between the two hemispheres?

- a) Medulla  
CONSIDER THIS: If this band of nerve fibers is severed, the two halves of the brain can no longer communicate directly. LO 2.3c Describe the two hemispheres of the brain.
- b) Hippocampus  
CONSIDER THIS: If this band of nerve fibers is severed, the two halves of the brain can no longer communicate directly. LO 2.3c Describe the two hemispheres of the brain.
- c) Cerebellum  
CONSIDER THIS: If this band of nerve fibers is severed, the two halves of the brain can no longer communicate directly. LO 2.3c Describe the two hemispheres of the brain.
- d) Corpus callosum

Answer: d

Learning Objective: 2.3c Describe the two hemispheres of the brain.

Module: 2.3: The Brain

Difficulty Level: Easy

Skill Level: Remember the Facts

#### EOM Q2.3.5

The brain's ability to change at any age is referred to as \_\_\_\_\_.

- a) Neuroanatomy  
CONSIDER THIS: The brain is far more flexible than scientists previously thought; the cortex can shrink or thicken, and the connections between neurons can be strengthened or weakened. LO 2.3d Explain neuroplasticity and neurogenesis.
- b) plasticity
- c) neurogenesis  
CONSIDER THIS: The brain is far more flexible than scientists previously thought; the cortex can shrink or thicken, and the connections between neurons can be strengthened or weakened. LO 2.3d Explain neuroplasticity and neurogenesis.

- d) hemispheric specialization

CONSIDER THIS: The brain is far more flexible than scientists previously thought; the cortex can shrink or thicken, and the connections between neurons can be strengthened or weakened. LO 2.3d Explain neuroplasticity and neurogenesis.

Answer: b

Learning Objective: 2.3d Explain neuroplasticity and neurogenesis.

Module: 2.3: The Brain

Difficulty Level: Easy

Skill Level: Remember the Facts

## End of Module Quiz 2.4: Studies That Changed Psychology: Then and Now

### EOM Q2.4.1

How accurate are books and motivational programs that tout being "left-brained" or "right-brained?"

- a) Somewhat accurate; most people are right-brained, which explains why most people are right-handed.

CONSIDER THIS: How does scientific understanding of how the brain works match up to what these books and programs promote? LO 2.4a: Demonstrate psychology information literacy through an understanding of research methods and design.

- b) Very accurate; left- or right-brained people behave vastly differently in the world.

CONSIDER THIS: How does scientific understanding of how the brain works match up to what these books and programs promote? LO 2.4a: Demonstrate psychology information literacy through an understanding of research methods and design.

- c) Somewhat accurate; the majority of people are right-brained, so really it's just that hemisphere that should get attention.

CONSIDER THIS: How does scientific understanding of how the brain works match up to what these books and programs promote? LO 2.4a: Demonstrate psychology information literacy through an understanding of research methods and design.

- d) Not very accurate; virtually everyone uses all of their brains all of the time.

Answer: d

Learning Objective: 2.4a: Demonstrate psychology information literacy through an understanding of research methods and design.

Module: 2.4: Studies That Changed Psychology: Then and Now

Difficulty Level: Moderate

Skill Level: Understand the Concepts

### EOM Q2.4.2

Why might someone's corpus callosum be surgically severed?

- a) To treat otherwise-intractable epilepsy

- b) Because they volunteered to be part of a neuroscience experiment

CONSIDER THIS: Split-brain patients typically became that way because of a medical need for the procedure. LO2.4a: Demonstrate psychology information literacy through an understanding of research methods and design.

- c) To remove dead brain cells

CONSIDER THIS: Split-brain patients typically became that way because of a medical

need for the procedure. LO 2.4a: Demonstrate psychology information literacy through an understanding of research methods and design.

- d) To treat rare vision problems

CONSIDER THIS: Split-brain patients typically became that way because of a medical need for the procedure. LO 2.4a: Demonstrate psychology information literacy through an understanding of research methods and design.

Answer: a

Learning Objective: 2.4a: Demonstrate psychology information literacy through an understanding of research methods and design.

Module: 2.4: Studies That Changed Psychology: Then and Now

Difficulty Level: Easy

Skill Level: Remember the Facts

### EOM Q2.4.3

What does contralateral control mean?

- a) The left hemisphere controls the right hemisphere.

CONSIDER THIS: Contralateral control refers to a counterintuitive but well-established fact regarding how the brain functions. LO 2.4a: Demonstrate psychology information literacy through an understanding of research methods and design.

- b) The right hemisphere controls the hindbrain.

CONSIDER THIS: Contralateral control refers to a counterintuitive but well-established fact regarding how the brain functions. LO 2.4a: Demonstrate psychology information literacy through an understanding of research methods and design.

- c) Each hemisphere controls functions on the opposite side of the body.

- d) Each hemisphere controls functions on its corresponding side of the body.

CONSIDER THIS: Contralateral control refers to a counterintuitive but well-established fact regarding how the brain functions. LO 2.4a: Demonstrate psychology information literacy through an understanding of research methods and design.

Answer: c

Learning Objective: 2.4a: Demonstrate psychology information literacy through an understanding of research methods and design.

Module: 2.4: Studies That Changed Psychology: Then and Now

Difficulty Level: Easy

Skill Level: Remember the Facts

### EOM Q2.4.4

If a split-brain patient receives information only in the right hemisphere and is then asked to verbalize what she saw after seeing a picture of a moose, what is the patient likely to say?

- a) "I saw a moose."

CONSIDER THIS: Recall which tasks are specialized in the left and right hemispheres. LO 2.4a: Demonstrate psychology information literacy through an understanding of research methods and design.

- b) "I don't know what I saw."

- c) "I saw an image, but the picture was too fuzzy to make out any details."

CONSIDER THIS: Recall which tasks are specialized in the left and right hemispheres.

LO 2.4a: Demonstrate psychology information literacy through an understanding of research methods and design.

- d) "I saw an image of a large animal."

CONSIDER THIS: Recall which tasks are specialized in the left and right hemispheres.

LO 2.4a: Demonstrate psychology information literacy through an understanding of research methods and design.

Answer: b

Learning Objective: 2.4a: Demonstrate psychology information literacy through an understanding of research methods and design.

Module: 2.4: Studies That Changed Psychology: Then and Now

Difficulty Level: Moderate

Skill Level: Analyze It

### EOM Q2.4.5

If a split-brain patient receives an image of a zucchini only in the right hemisphere and is then asked to pick up the actual item using her left hand, what is the patient likely to grasp?

- a) Nothing

CONSIDER THIS: The right hemisphere would control the left hand, and the right hemisphere is where the information was received. LO 2.4a: Demonstrate psychology information literacy through an understanding of research methods and design.

- b) A turnip

CONSIDER THIS: The right hemisphere would control the left hand, and the right hemisphere is where the information was received. LO 2.4a: Demonstrate psychology information literacy through an understanding of research methods and design.

- c) A zucchini

- d) An apple

CONSIDER THIS: The right hemisphere would control the left hand, and the right hemisphere is where the information was received. LO 2.4a: Demonstrate psychology information literacy through an understanding of research methods and design.

Answer: c

Learning Objective: 2.4a: Demonstrate psychology information literacy through an understanding of research methods and design.

Module: 2.4: Studies That Changed Psychology: Then and Now

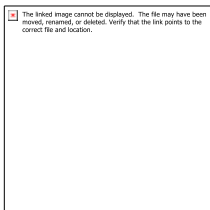
Difficulty Level: Easy

Skill Level: Analyze It

## Chapter 2 Quiz: Biology and Behavior

### EOC Q2.1

Which model of behavior is being depicted here?



- a) Holistic  
CONSIDER THIS: This model breaks down complex phenomena into simpler components, just like a funnel focuses the flow of material from broad to narrow. LO 2.1a Describe the reductionist and holistic approaches to studying behavior.
- b) Biopsychosocial  
CONSIDER THIS: This model breaks down complex phenomena into simpler components, just like a funnel focuses the flow of material from broad to narrow. LO 2.1a Describe the reductionist and holistic approaches to studying behavior.
- c) Reductionist
- d) Epigenetic  
CONSIDER THIS: This model breaks down complex phenomena into simpler components, just like a funnel focuses the flow of material from broad to narrow. LO 2.1a Describe the reductionist and holistic approaches to studying behavior.

Answer: c

Learning Objective: 2.1a Describe the reductionist and holistic approaches to studying behavior.

Module: Biology and Behavior

Difficulty Level: Easy

Skill Level: Understand the Concepts

#### EOC Q2.2

Each day at the high school, cafeteria employees wait for their daily assignment from the cafeteria manager. Some of the tasks include prepping food for lunch, overseeing the cash register, and preparing the serving line. If you were to relate the workings of the cafeteria to the human genome, which part would the manager be?

- a) The X chromosome  
CONSIDER THIS: This "boss" of the genome controls whether or not a particular gene will be "promoted," "fired," or "furloughed." LO 2.1b Define epigenetics and describe how the epigenome acts as a mediator between genetics and the environment.
- b) DNA molecule  
CONSIDER THIS: This "boss" of the genome controls whether or not a particular gene will be "promoted," "fired," or "furloughed." LO 2.1b Define epigenetics and describe how the epigenome acts as a mediator between genetics and the environment.
- c) The gene  
CONSIDER THIS: This "boss" of the genome controls whether or not a particular gene will be "promoted," "fired," or "furloughed." LO 2.1b Define epigenetics and describe how the epigenome acts as a mediator between genetics and the environment.
- d) The epigenome

Answer: d

Learning Objective: 2.1b Define epigenetics and describe how the epigenome acts as a mediator between genetics and the environment.

Module: Biology and Behavior

Difficulty Level: Difficult

Skill Level: Analyze It

#### EOC Q2.3

Clarisse is majoring in biology. She has the opportunity to join a field study that will be researching the eastern turkey vulture. The professor leading the study told the volunteers that they will be examining the differences between subspecies, traits that make survival easier, and the degree to which those traits are passed onto offspring. Which theory will Clarisse's group be studying?

- a) Natural selection
- b) Darwinism

CONSIDER THIS: The components of this approach include variation, inheritance, and survival of the fittest. LO 2.1c Understand the concepts of evolution and natural selection.

- c) Avian inheritance

CONSIDER THIS: The components of this approach include variation, inheritance, and survival of the fittest. LO 2.1c Understand the concepts of evolution and natural selection.

- d) Biological replication

CONSIDER THIS: The components of this approach include variation, inheritance, and survival of the fittest. LO 2.1c Understand the concepts of evolution and natural selection.

Answer: a

Learning Objective: 2.1c Understand the concepts of evolution and natural selection.

Module: Biology and Behavior

Difficulty Level: Moderate

Skill Level: Understand the Concepts

#### EOC Q2.4

The part of a neuron that receives information from neighboring neurons is called the \_\_\_\_\_.

- a) dendrites
- b) axon

CONSIDER THIS: There are usually many of these structures on a single neuron. LO 2.2a Describe the structure and function of neurons.

- c) Soma

CONSIDER THIS: There are usually many of these structures on a single neuron. LO 2.2a Describe the structure and function of neurons.

- d) Nucleus

CONSIDER THIS: There are usually many of these structures on a single neuron. LO 2.2a Describe the structure and function of neurons.

Answer: a

Learning Objective: 2.2a Describe the structure and function of neurons.

Module: Biology and Behavior

Difficulty Level: Easy

Skill Level: Remember the Facts

#### EOC Q2.5

Specialized neurons that help us understand and empathize with others are called \_\_\_\_\_.

- a) mirror neurons

- b) motor neurons  
CONSIDER THIS: These neurons have been found in the brains of many primates. LO 2.2a Describe the structure and function of neurons.
- c) the sympathetic nervous system  
CONSIDER THIS: These neurons have been found in the brains of many primates. LO 2.2a Describe the structure and function of neurons.
- d) the empathetic nervous system  
CONSIDER THIS: These neurons have been found in the brains of many primates. LO 2.2a Describe the structure and function of neurons.

Answer: a

Learning Objective: 2.2a Describe the structure and function of neurons.

Module: Biology and Behavior

Difficulty Level: Easy

Skill Level: Remember the Facts

#### EOC Q2.6

A young girl has recently developed an intense case of poison ivy. Which of her neurons are transmitting the messages of pain and itch to her brain?

- a) Synaptic neurons  
CONSIDER THIS: These neurons run from the receptors in our different senses to the brain and spinal cord. LO 2.2a Describe the structure and function of neurons.
- b) Motor neurons  
CONSIDER THIS: These neurons run from the receptors in our different senses to the brain and spinal cord. LO 2.2a Describe the structure and function of neurons.
- c) Sensory neurons
- d) Association neurons  
CONSIDER THIS: These neurons run from the receptors in our different senses to the brain and spinal cord. LO 2.2a Describe the structure and function of neurons.

Answer: c

Learning Objective: 2.2a Describe the structure and function of neurons.

Module: Biology and Behavior

Difficulty Level: Easy

Skill Level: Remember the Facts

#### EOC Q2.7

What takes place when a neuron moves into a state of action potential?

- a) Channels in the cell membrane open and positive ions rush into the cell.
- b) Interneurons connect briefly with mirror neurons to produce motor output.  
CONSIDER THIS: The formation of an action potential is one of the fundamental processes that takes place as neurons communicate with one another. LO 2.2b Explain how neural messages are transmitted.
- c) A cell loses one or more of its dendrites.  
CONSIDER THIS: The formation of an action potential is one of the fundamental processes that takes place as neurons communicate with one another. LO 2.2b Explain how neural messages are transmitted.

- d) Positive and negative ions bond to one another to form axons.  
CONSIDER THIS: The formation of an action potential is one of the fundamental processes that takes place as neurons communicate with one another. LO 2.2b Explain how neural messages are transmitted.

Answer: a

Learning Objective: 2.2b Explain how neural messages are transmitted.

Module: Biology and Behavior

Difficulty Level: Moderate

Skill Level: Analyze It

#### EOC Q2.8

Which of the following is NOT a major neurotransmitter found in the human brain?

- a) Parathyroid  
b) Dopamine  
CONSIDER THIS: Neurotransmitters are chemical messengers in the brain, and usually are specialized for different kinds of functions. LO 2.2b Explain how neural messages are transmitted.
- c) Serotonin  
CONSIDER THIS: Neurotransmitters are chemical messengers in the brain, and usually are specialized for different kinds of functions. LO 2.2b Explain how neural messages are transmitted.
- d) Glutamate  
CONSIDER THIS: Neurotransmitters are chemical messengers in the brain, and usually are specialized for different kinds of functions. LO 2.2b Explain how neural messages are transmitted.

Answer: a

Learning Objective: 2.2b Explain how neural messages are transmitted.

Module: Biology and Behavior

Difficulty Level: Moderate

Skill Level: Analyze It

#### EOC Q2.9

While home alone one night, you hear the squeal of tires and a loud crash. Your body intensely reacts by jolting you out of your chair and propelling you toward the door. Which system has produced such a dramatic change so quickly?

- a) Limbic system  
CONSIDER THIS: This subdivision of the autonomic nervous system is the body's emergency nervous system. LO 2.2c Identify the major divisions of the nervous system.
- b) Sympathetic nervous system  
c) Somatic nervous system  
CONSIDER THIS: This subdivision of the autonomic nervous system is the body's emergency nervous system. LO 2.2c Identify the major divisions of the nervous system.
- d) Parasympathetic nervous system  
CONSIDER THIS: This subdivision of the autonomic nervous system is the body's emergency nervous system. LO 2.2c Identify the major divisions of the nervous system.

Answer: b



Learning Objective: 2.2c Identify the major divisions of the nervous system.

Module: Biology and Behavior

Difficulty Level: Easy

Skill Level: Remember the Facts

EOC Q2.10

The thyroid and pituitary gland play a major role in the \_\_\_\_\_ system.

a) Lymphatic

CONSIDER THIS: This communication system is made up of a collection of hormone-producing glands. LO 2.2d Explain the purpose and function of the endocrine system.

b) Nervous

CONSIDER THIS: This communication system is made up of a collection of hormone-producing glands. LO 2.2d Explain the purpose and function of the endocrine system.

c) Digestive

CONSIDER THIS: This communication system is made up of a collection of hormone-producing glands. LO 2.2d Explain the purpose and function of the endocrine system.

d) endocrine

Answer: d

Learning Objective: 2.2d Explain the purpose and function of the endocrine system.

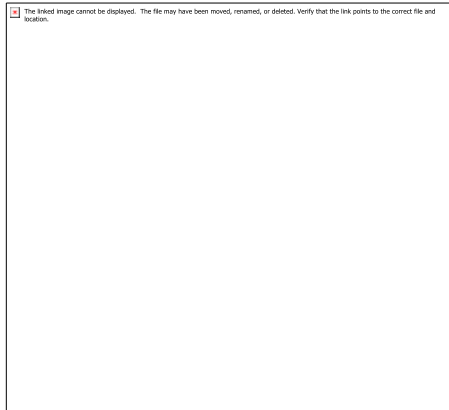
Module: Biology and Behavior

Difficulty Level: Easy

Skill Level: Remember the Facts

EOC Q2.11

Which brain-imaging method is being shown here?



a) Electroencephalography (EEG)

CONSIDER THIS: This method is very important for showing internal detail but isn't able to capture fast-moving events. LO 2.3a Describe the basic techniques for studying the brain.

b) Positron emission tomography (PET)

CONSIDER THIS: This method is very important for showing internal detail but isn't able to capture fast-moving events. LO 2.3a Describe the basic techniques for studying the brain.

- c) Functional magnetic resonance imaging (fMRI)  
CONSIDER THIS: This method is very important for showing internal detail but isn't able to capture fast-moving events. LO 2.3a Describe the basic techniques for studying the brain.
- d) Magnetic resonance imaging (MRI)

Answer: d

Learning Objective: 2.3a Describe the basic techniques for studying the brain.

Module: Biology and Behavior

Difficulty Level: Moderate

Skill Level: Biology and Behavior

### EOC Q2.12

A young man has been admitted to the hospital after a serious fall from a horse. He was not wearing a helmet, and as a result has suffered from an inability to form new memories. He can remember past events, but nothing since the fall. Which area of his brain was most likely damaged?

- a) The hippocampus
- b) The hypothalamus  
CONSIDER THIS: This structure of the limbic system is involved in spatial awareness and memory. LO 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.
- c) The pons  
CONSIDER THIS: This structure of the limbic system is involved in spatial awareness and memory. LO 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.
- d) The fornix  
CONSIDER THIS: This structure of the limbic system is involved in spatial awareness and memory. LO 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Answer: a

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Module: Biology and Behavior

Difficulty Level: Moderate

Skill Level: Remember the Facts

### EOC Q2.13

The two important functions in which the structures of the limbic system play a role are \_\_\_\_\_ and \_\_\_\_\_.

- a) spatial tasks; sequential tasks  
CONSIDER THIS: The limbic system, which also contains the brain's pleasure center, is made up of the thalamus, the hypothalamus, the hippocampus, and the amygdala. LO 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.
- b) heart rate; breathing  
CONSIDER THIS: The limbic system, which also contains the brain's pleasure center, is

made up of the thalamus, the hypothalamus, the hippocampus, and the amygdala. LO 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

c) auditory; visual

CONSIDER THIS: The limbic system, which also contains the brain's pleasure center, is made up of the thalamus, the hypothalamus, the hippocampus, and the amygdala. LO 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

d) memory; emotion

Answer: d

Learning Objective: 2.3b Differentiate between the major structures of the brain, including the hindbrain, midbrain, limbic system, and cerebral cortex.

Module: Biology and Behavior

Difficulty Level: Moderate

Skill Level: Understand the Concepts

EOC Q2.14

The left side of the body is primarily controlled by \_\_\_\_\_.

a) spatial reasoning

CONSIDER THIS: The brain is divided into two cerebral hemispheres, each of which is specialized for various tasks. LO 2.3c Describe the two hemispheres of the brain.

b) the right cerebral hemisphere

c) the left cerebral hemisphere

CONSIDER THIS: The brain is divided into two cerebral hemispheres, each of which is specialized for various tasks. LO 2.3c Describe the two hemispheres of the brain.

d) the temporal lobe

CONSIDER THIS: The brain is divided into two cerebral hemispheres, each of which is specialized for various tasks. LO 2.3c Describe the two hemispheres of the brain.

Answer: b

Learning Objective: 2.3c Describe the two hemispheres of the brain.

Module: Biology and Behavior

Difficulty Level: Easy

Skill Level: Understand the Concepts

EOC Q2.15

When used in reference to the human brain, the term "plasticity" means \_\_\_\_\_.

a) the brain's tendency to be easily broken or "cracked"

CONSIDER THIS: Scientists have learned that the cortex can shrink or thicken and that the connections between neurons can be strengthened or weakened. LO 2.3d Explain neuroplasticity and neurogenesis.

b) the brain's ability to flex under pressure

CONSIDER THIS: Scientists have learned that the cortex can shrink or thicken and that the connections between neurons can be strengthened or weakened. LO 2.3d Explain neuroplasticity and neurogenesis.

c) the brain's ability to adapt to new conditions

d) the brain's massive complexity

CONSIDER THIS: Scientists have learned that the cortex can shrink or thicken and that the connections between neurons can be strengthened or weakened. LO 2.3d Explain neuroplasticity and neurogenesis.

Answer: c

Learning Objective: 2.3d Explain neuroplasticity and neurogenesis.

Module: Biology and Behavior

Difficulty Level: Easy

Skill Level: Understand the Concepts