

Test Bank for Essentials of Understanding Psychology 13th Feldman

Essentials of Understanding Psychology, 13e (Feldman)
Chapter 2 Neuroscience and Behavior

1) Psychologists who specialize in considering the ways in which the biological structures and functions of the body affect behavior are known as

- A) genetic psychologists.
- B) biopsychologists.
- C) evolutionary psychologists.
- D) clinical neuropsychologists.

Answer: B

Difficulty: 1 Easy Page Ref: 46

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurons

Learning Objective: Identify the parts of a neuron.

Bloom's: Remember

APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology

2) Alison has developed an interest in the ways in which the biological structures and functions of the body affect behavior. She will most likely become a(n)

- A) genetic psychologist.
- B) behavioral neuroscientist.
- C) evolutionary psychologist.
- D) clinical neuropsychologist.

Answer: B

Difficulty: 2 Medium Page Ref: 46

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurons

Learning Objective: Identify the parts of a neuron.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains; 1.3: Describe applications of psychology

- 3) The basic elements of the nervous system are called
- A) dendrites.
 - B) terminal buttons.
 - C) neurons.
 - D) neurotransmitters.

Answer: C

Difficulty: 1 Easy Page Ref: 47

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurons

Learning Objective: Identify the parts of a neuron.

Bloom's: Remember

APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology

- 4) As many as _____ neurons throughout the body are involved in the control of behavior.
- A) 1 billion
 - B) 1 trillion
 - C) 5 million
 - D) 50 million

Answer: B

Difficulty: 1 Easy Page Ref: 47

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurons

Learning Objective: Describe how nerve cells communicate with other nerve cells.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

- 5) Neurons are physically held in place by
- A) axons.
 - B) glial cells.
 - C) synapses.
 - D) terminal buttons.

Answer: B

Difficulty: 1 Easy Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurons

Learning Objective: Identify the parts of a neuron.

Bloom's: Remember

APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology

6) Which of the following is NOT one of the functions of glial cells?

- A) They nourish nerve cells.
- B) They communicate messages within the nervous system.
- C) They help repair damage that might occur to neurons.
- D) They provide nourishment to neurons.

Answer: B

Difficulty: 2 Medium Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurons

Learning Objective: Describe how nerve cells communicate with other nerve cells.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

7) A cluster of fibers at one end of a neuron that receives messages from other neurons is called

- A) axon.
- B) terminal button.
- C) glial fiber.
- D) dendrite.

Answer: D

Difficulty: 1 Easy Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurons

Learning Objective: Identify the parts of a neuron.

Bloom's: Remember

APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology

8) Compare your forearm, palm, wrist, and fingers to a neuron. In such an analogy, the dendrites would be your

- A) forearm.
- B) fingers.
- C) wrist.
- D) palm.

Answer: B

Difficulty: 2 Medium Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurons

Learning Objective: Identify the parts of a neuron.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

- 9) An axon is a
- A) neuron's cell body.
 - B) cluster of fibers at one end of a neuron.
 - C) support cell in the nervous system.
 - D) long, slim, tube-like structure extending from a neuron.

Answer: D

Difficulty: 1 Easy Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurons

Learning Objective: Identify the parts of a neuron.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

- 10) Which of the following structures is especially important for carrying messages received by the dendrites to other neurons?
- A) the myelin sheath
 - B) endorphins
 - C) axons
 - D) glial cells

Answer: C

Difficulty: 2 Medium Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurons

Learning Objective: Identify the parts of a neuron.

Bloom's: Understand

APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology

- 11) Terminal buttons are found at the end of
- A) synapses.
 - B) dendrites.
 - C) axons.
 - D) myelin cells.

Answer: C

Difficulty: 1 Easy Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurons

Learning Objective: Identify the parts of a neuron.

Bloom's: Remember

APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology

12) Which of the following sequences correctly arranges nervous system structures from the most general to the most specific?

- A) neuron → axon → terminal button
- B) neuron → terminal button → axon
- C) axon → terminal button → neuron
- D) axon → neuron → terminal button

Answer: A

Difficulty: 2 Medium Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Nervous System

Learning Objective: Identify the parts of a neuron.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

13) Dendrite is to axon what _____ is to _____.

- A) receiving; sending
- B) sending; receiving
- C) reuptake; action potential
- D) action potential; reuptake

Answer: A

Difficulty: 1 Easy Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurons

Learning Objective: Identify the parts of a neuron.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

14) Compare your forearm, palm, knuckles, and fingers to a neuron. In such an analogy, the axon would be your

- A) forearm.
- B) fingers.
- C) palm.
- D) knuckles.

Answer: A

Difficulty: 1 Easy Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurons

Learning Objective: Identify the parts of a neuron.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

15) Which of the following sequences accurately reflects the route followed by nerve impulses when one neuron communicates with another?

- A) dendrite → axon → cell body
- B) dendrite → cell body → axon
- C) cell body → axon → dendrite
- D) axon → dendrite → cell body

Answer: B

Difficulty: 2 Medium Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: How Neurons Fire

Learning Objective: Identify the parts of a neuron.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

16) Electrical wires are generally protected by a tube of plastic. Similarly, most axons are insulated by a

- A) myelin sheath.
- B) glial cell.
- C) dendrite.
- D) synapse.

Answer: A

Difficulty: 2 Medium Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurons

Learning Objective: Identify the parts of a neuron.

Bloom's: Understand

APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology

17) A _____ is a protective coat of fat and protein that wraps around the axon.

- A) myelin sheath
- B) neuron
- C) terminal button
- D) synapse

Answer: A

Difficulty: 1 Easy Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurons

Learning Objective: Identify the parts of a neuron.

Bloom's: Remember

APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology

18) You cannot fire a gun softly, or flush a toilet halfway. Like an action potential, gun fire and a toilet's flush follow the _____ law.

- A) incremental transformation
- B) graded action
- C) all-or-none
- D) intensity of stimulus

Answer: C

Difficulty: 3 Hard Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: How Neurons Fire

Learning Objective: Explain how neurons transmit information.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

19) The rule that neurons are either on or off is known as the _____ law.

- A) intensity of stimulus
- B) graded action
- C) all-or-none
- D) incremental transformational

Answer: C

Difficulty: 1 Easy Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: How Neurons Fire

Learning Objective: Identify the parts of a neuron.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

20) The state in which there is a negative electrical charge of about -70 millivolts within a neuron is known as the _____ state.

- A) triggering
- B) terminal
- C) optimum
- D) resting

Answer: D

Difficulty: 1 Easy Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: How Neurons Fire

Learning Objective: Explain how neurons transmit information.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

21) Regarding action potentials, which of the following statements is TRUE?

- A) As the impulse travels along the axon, the movement of ions causes a change in charge from positive to neutral in successive sections of the axon.
- B) The action potential moves from one end of the axon to the other like a flame moving along a fuse.
- C) After the impulse has passed through a particular section of the axon, negative ions are pumped out of that section, and its charge returns to positive while the action potential continues to move along the axon.
- D) Just after an action potential has passed through a section of the axon, a neuron can fire again immediately if it receives appropriate stimulation.

Answer: B

Difficulty: 2 Medium Page Ref: 55

Section: 5: Neurons: The Basic Elements of Behavior

Topic: How Neurons Fire

Learning Objective: Explain how neurons transmit information.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

22) As an action potential occurs, the neuron's electrical charge

- A) changes from negative to neutral.
- B) changes from positive to neutral.
- C) changes from negative to positive.
- D) changes from positive to negative.

Answer: C

Difficulty: 2 Medium Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: How Neurons Fire

Learning Objective: Explain how neurons transmit information.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

23) _____ are specialized neurons that fire not only when a person enacts a particular behavior, but also when a person simply observes another individual carrying out the same behavior.

- A) Pharyngeal motor neuron
- B) Mirror neurons
- C) Ventral cord motor neuron
- D) Amphid neurons

Answer: B

Difficulty: 1 Easy Page Ref: 50

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Mirror Neurons

Learning Objective: Explain how neurons transmit information.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

24) Regarding mirror neurons, which of the following statements is ACCURATE?

- A) Mirror neurons are involved in face recognition and language acquisition, but not in empathy.
- B) Mirror neurons are involved in empathy and face recognition, but not in language acquisition.
- C) Mirror neurons are involved in empathy, language acquisition, and mood swings.
- D) Mirror neurons are involved in empathy, language acquisition, and speech perception.

Answer: D

Difficulty: 2 Medium Page Ref: 50

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Mirror Neurons

Learning Objective: Explain how neurons transmit information.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

25) A synapse is a

- A) chemical.
- B) signal.
- C) joint.
- D) gap.

Answer: D

Difficulty: 2 Medium Page Ref: 50

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Synapse

Learning Objective: Identify the parts of a neuron.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

26) A _____ is the space between two neurons where the axon of a sending neuron communicates with the dendrites of a receiving neuron by using chemical messages.

- A) synapse
- B) terminal button
- C) dendrite
- D) myelin sheath

Answer: A

Difficulty: 1 Easy Page Ref: 57

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Synapse

Learning Objective: Identify the parts of a neuron.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

27) Which of the following statements regarding inhibitory messages is TRUE?

- A) Inhibitory messages always increase the likelihood that a receiving neuron will fire.
- B) Inhibitory messages decrease the likelihood that a receiving neuron will fire.
- C) The dendrites of a neuron cannot receive both excitatory and inhibitory messages simultaneously.
- D) Inhibitory messages make it more likely that an action potential will travel down its axon.

Answer: B

Difficulty: 2 Medium Page Ref: 52

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurotransmitters

Learning Objective: Identify the key neurotransmitters and their functions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

28) The reabsorption of neurotransmitters by a terminal button is termed as

- A) recycling.
- B) reassertion.
- C) reuptake.
- D) reuse.

Answer: C

Difficulty: 1 Easy Page Ref: 52

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurotransmitters

Learning Objective: Explain how neurotransmitters influence behavior.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

29) In the context of neurotransmitters, identify an accurate statement.

- A) They carry messages within neurons.
- B) Gamma-aminobutyric acid (GABA) is an example of an inhibitory neurotransmitter.
- C) They are primarily responsible for breaking down mitochondria.
- D) They have no effect on neuron behavior.

Answer: B

Difficulty: 2 Medium Page Ref: 52

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurotransmitters

Learning Objective: Identify the key neurotransmitters and their functions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

30) The neurotransmitter dopamine is involved in

- A) the brain's effort to deal with a change in temperature.
- B) the digestion of food.
- C) the regulation of sleep, eating, mood, and pain.
- D) movement, attention, and learning.

Answer: D

Difficulty: 2 Medium Page Ref: 52

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurotransmitters

Learning Objective: Identify the key neurotransmitters and their functions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

31) Which of the following neurotransmitters is correctly matched with one of its psychological functions?

- A) acetylcholine and pain suppression
- B) endorphins and movement control
- C) dopamine and facilitation of learning
- D) serotonin and contribution to memory

Answer: C

Difficulty: 2 Medium Page Ref: 52

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurotransmitters

Learning Objective: Identify the key neurotransmitters and their functions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

32) Which of the following disorders is correctly paired with an associated neurotransmitter?

- A) Parkinson's disease and dopamine
- B) Crohn's disease and acetylcholine
- C) Turner syndrome and glutamate
- D) Alzheimer's disease and endorphins

Answer: A

Difficulty: 2 Medium Page Ref: 52

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurotransmitters

Learning Objective: Identify the key neurotransmitters and their functions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

33) Inhibitory is to excitatory what _____ is to _____.

- A) glutamate; GABA
- B) glutamate; acetylcholine
- C) GABA; glutamate
- D) endorphins; GABA

Answer: C

Difficulty: 2 Medium Page Ref: 52

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurotransmitters

Learning Objective: Identify the key neurotransmitters and their functions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

34) Filip, aged 64, was recently diagnosed with Alzheimer's. His medical reports will most likely reveal the diminished production of

- A) dopamine.
- B) serotonin.
- C) acetylcholine.
- D) gamma-amino butyric acid.

Answer: C

Difficulty: 3 Hard Page Ref: 52

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurotransmitters

Learning Objective: Identify the key neurotransmitters and their functions.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

35) Jack has lost his appetite, is unable to sleep, and experiences frequent mood swings. His condition can be attributed to the diminished production of the hormone

- A) serotonin.
- B) dopamine.
- C) acetylcholine.
- D) adrenaline.

Answer: A

Difficulty: 3 Hard Page Ref: 53

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurotransmitters

Learning Objective: Identify the key neurotransmitters and their functions.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

36) Which expression below most closely approximates the number of neural connections in the human brain?

- A) 10 quadrillion
- B) 1 million
- C) 1 billion
- D) 1 trillion

Answer: A

Difficulty: 2 Medium Page Ref: 55

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Nervous System

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

37) The nervous system is divided into the _____ and the _____ nervous systems.

- A) primary; secondary
- B) somatic; autonomic
- C) sympathetic; parasympathetic
- D) central; peripheral

Answer: D

Difficulty: 1 Easy Page Ref: 55

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Nervous System

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

38) The brain and the spinal cord constitute the _____ nervous system.

- A) central
- B) peripheral
- C) extraneous
- D) parasympathetic

Answer: A

Difficulty: 1 Easy Page Ref: 55

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Central Nervous System

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains; 1.1: Describe key concepts, principles, and overarching themes in psychology

39) _____ is an automatic, involuntary response to an incoming stimulus.

- A) Action potential
- B) Intuition
- C) Instinct
- D) Reflex

Answer: D

Difficulty: 1 Easy Page Ref: 55

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Reflexes

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

40) The _____ is the primary means for transmitting messages between the brain and the rest of the body.

- A) hypothalamus
- B) myelin sheath
- C) axon
- D) spinal cord

Answer: D

Difficulty: 3 Hard Page Ref: 55

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Central Nervous System

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

- 41) Which of the following is TRUE of the spinal cord's control of behavior?
- A) The spinal cord cannot control any behaviors without the help of the brain.
 - B) The spinal cord is not involved in reflexes.
 - C) The spinal cord can control some simple reflexes without the brain's help.
 - D) The spinal cord can control relatively complex behavior without the brain's help.

Answer: C

Difficulty: 2 Medium Page Ref: 55

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Central Nervous System

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

- 42) The central nervous system is composed of _____. The peripheral nervous system comprises _____.
- A) the somatic and autonomic nervous systems; the sympathetic and parasympathetic nervous systems
 - B) the somatic and autonomic nervous systems; the brain and the spinal cord
 - C) the sympathetic and parasympathetic nervous systems; the somatic and autonomic nervous systems
 - D) the brain and the spinal cord; the somatic and autonomic nervous systems

Answer: D

Difficulty: 1 Easy Page Ref: 55, 57

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Nervous System

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

- 43) Sensory is to motor what _____ is to _____.
- A) efferent; afferent
 - B) afferent; efferent
 - C) somatic; autonomic
 - D) autonomic; somatic

Answer: B

Difficulty: 2 Medium Page Ref: 55

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Central Nervous System

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

44) _____ communicate information from the brain and nervous system to muscles and glands.

- A) Sensory neurons
- B) Interneurons
- C) Motor neurons
- D) Autoneurons

Answer: C

Difficulty: 2 Medium Page Ref: 55

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Central Nervous System

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

45) The two major divisions of the peripheral nervous system are the _____ and _____ divisions.

- A) somatic; autonomic
- B) sympathetic; parasympathetic
- C) afferent; efferent
- D) sensory; motor

Answer: A

Difficulty: 2 Medium Page Ref: 57

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Peripheral Nervous System

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

46) Lena falls down a flight of stairs. The impact of the fall results in the loss of voluntary muscle movement below her neck. Which of the following conditions is Lena suffering from?

- A) salmonella
- B) Turner syndrome
- C) quadriplegia
- D) Crohn's disease

Answer: C

Difficulty: 3 Hard Page Ref: 57

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Central Nervous System

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Apply

APA Outcome: 1.3: Describe applications of psychology

47) _____ is the part of the peripheral nervous system that specializes in the control of voluntary movements and the communication of information to and from the sense organs.

- A) Somatic division
- B) Sympathetic division
- C) Parasympathetic division
- D) Autonomic division

Answer: A

Difficulty: 1 Easy Page Ref: 57

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Peripheral Nervous System

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

48) Somatic is to autonomic what _____ is to _____.

- A) involuntary; voluntary
- B) voluntary; involuntary
- C) sensory; motor
- D) motor; sensory

Answer: B

Difficulty: 3 Hard Page Ref: 57

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Peripheral Nervous System

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

49) Emily is about to cross a road when she sees a car speeding toward her. She immediately jumps out of the way and is able to avoid major injuries. Which of the following is a part of the peripheral nervous system to which Emily's reaction can be attributed?

- A) the biofeedback division
- B) the autonomic division
- C) the spinal cord
- D) the brain

Answer: B

Difficulty: 3 Hard Page Ref: 57

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Peripheral Nervous System

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Apply

APA Outcome: 1.3: Describe applications of psychology

50) The part of the autonomic division of the nervous system that acts to prepare the body for action in stressful situations, engaging all the organism's resources to respond to a threat is known as the

- A) somatic division.
- B) sympathetic division.
- C) parasympathetic division.
- D) apathetic division.

Answer: B

Difficulty: 1 Easy Page Ref: 57

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Autonomic Division

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

51) The "fight-or-flight" response is associated with the _____ division.

- A) somatic
- B) sympathetic
- C) parasympathetic
- D) apathetic

Answer: B

Difficulty: 1 Easy Page Ref: 57

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Autonomic Division

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

52) The part of the autonomic division of the nervous system that acts to calm the body after an emergency has ended is known as the _____ division.

- A) somatic
- B) sympathetic
- C) parasympathetic
- D) apathetic

Answer: C

Difficulty: 1 Easy Page Ref: 57

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Autonomic Division

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

53) The _____ division also directs the body to store energy for use in emergencies.

- A) somatic
- B) sympathetic
- C) parasympathetic
- D) apathetic

Answer: C

Difficulty: 1 Easy Page Ref: 57

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Autonomic Division

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

54) Which of the following situations is most likely to involve the action of the parasympathetic nervous system?

- A) Brooke's finger accidentally grazes the hot iron; she immediately jerks her hand away.
- B) After mistaking her roommate for a thief, Callum relaxes after having a glass of water.
- C) Walking toward her car in a deserted parking lot one night, Danica is surprised by a strange man appearing from nowhere.
- D) Peyton is preparing to go to bed and is alarmed to see a stranger at her window.

Answer: B

Difficulty: 2 Medium Page Ref: 57

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Autonomic Division

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains; 1.3: Describe applications of psychology

55) With respect to its potential basis in nervous system activity, "voodoo death" has been attributed to

- A) the overstimulation of the sympathetic nervous system.
- B) an overactive parasympathetic nervous system.
- C) the cessation of sympathetic nervous system responses.
- D) an understimulated central nervous system.

Answer: A

Difficulty: 1 Easy Page Ref: 57

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Autonomic Division

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

56) Izzy sees a leopard in her backyard. Her pupils are dilated and her heart is pounding; her breathing is shallow and rapid. Her _____ nervous system is active.

- A) parasympathetic
- B) sympathetic
- C) apathetic
- D) somatic

Answer: B

Difficulty: 1 Easy Page Ref: 57

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Autonomic Division

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

57) Which of the following terms best describes the organization of the nervous system today?

- A) linear
- B) recursive
- C) hierarchical
- D) random

Answer: C

Difficulty: 2 Medium Page Ref: 59

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Evolutionary Foundations of Nervous System

Learning Objective: Explain how genetics increases our understanding of behavior.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

58) Which of the following is defined as the branch of psychology that seeks to identify behavior patterns that are a result of our genetic inheritance from our ancestors?

- A) industrial psychology
- B) cognitive psychology
- C) educational psychology
- D) evolutionary psychology

Answer: D

Difficulty: 1 Easy Page Ref: 59

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Evolutionary Foundations of Nervous System

Learning Objective: Explain how genetics increases our understanding of behavior.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

59) Identify a new and increasingly influential field spawned by evolutionary psychologists.

- A) forensic psychology
- B) clinical psychology
- C) physiological genetics
- D) behavioral genetics

Answer: D

Difficulty: 1 Easy Page Ref: 59

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Evolutionary Foundations of Nervous System

Learning Objective: Explain how genetics increases our understanding of behavior.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

60) Which of the following terms is defined as the study of the effects of heredity on behavior?

- A) behavioral genetics
- B) physiological genetics
- C) radiation genetics
- D) clinical genetics

Answer: A

Difficulty: 1 Easy Page Ref: 59

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Evolutionary Foundations of Nervous System

Learning Objective: Explain how genetics increases our understanding of behavior.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

61) Paul is investigating the potential genetic basis of borderline personality disorder. He is doing so by examining the relative occurrence of the disorder among either identical or fraternal twins, who are raised either together or in different families. Paul is best described as a

- A) behavioral geneticist.
- B) clinical geneticist.
- C) developmental geneticist.
- D) physiological geneticist.

Answer: A

Difficulty: 3 Hard Page Ref: 59

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Evolutionary Foundations of Nervous System

Learning Objective: Explain how genetics increases our understanding of behavior.

Bloom's: Apply

APA Outcome: 1.3: Describe applications of psychology

- 62) Which of the following statements best expresses the relationship between the nervous system and the endocrine system?
- A) They operate entirely independently.
 - B) The endocrine system is part of the central nervous system.
 - C) The endocrine system influences and is influenced by the functioning of the nervous system.
 - D) The central nervous system is one part of the endocrine system.

Answer: C

Difficulty: 1 Easy Page Ref: 59

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Endocrine System

Learning Objective: Describe the function of the endocrine system.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

- 63) Which of the following is a major component of the endocrine system that is a tiny gland found near—and regulated by—the hypothalamus in the brain?
- A) adrenal gland
 - B) thyroid gland
 - C) reproductive gland
 - D) pituitary gland

Answer: D

Difficulty: 1 Easy Page Ref: 59

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Endocrine System

Learning Objective: Describe the function of the endocrine system.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

- 64) Which of the following glands secretes hormones that control growth and other parts of the endocrine system?
- A) adrenal gland
 - B) thyroid gland
 - C) parotid gland
 - D) pituitary gland

Answer: D

Difficulty: 1 Easy Page Ref: 59

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Endocrine System

Learning Objective: Describe the function of the endocrine system.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

65) Nadia is unusually tall for her age. Her doctor suspects that she has an abnormality in one of her glands. Which of the following glands is responsible for Nadia's condition?

- A) pituitary gland
- B) esophageal gland
- C) thyroid gland
- D) pineal gland

Answer: A

Difficulty: 3 Hard Page Ref: 59

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Endocrine System

Learning Objective: Describe the function of the endocrine system.

Bloom's: Apply

APA Outcome: 1.3: Describe applications of psychology

66) The hormone testosterone

- A) stimulates cuddling between species members.
- B) helps develop trust in others.
- C) produces an urge to nurse newborn offspring in new mothers.
- D) adds muscle weight and increases strength.

Answer: D

Difficulty: 1 Easy Page Ref: 60

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Endocrine System

Learning Objective: Describe the function of the endocrine system.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

67) Which of the following hormones produces an urge in new mothers to nurse newborn offspring?

- A) corticotropin
- B) gastrin
- C) melatonin
- D) oxytocin

Answer: D

Difficulty: 2 Medium Page Ref: 60

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Endocrine System

Learning Objective: Describe the function of the endocrine system.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

68) Which of the following hormones is CORRECTLY matched with its function?

- A) aldosterone—regulates daily rhythms
- B) erythropoietin—regulates the sodium and potassium balance in the blood
- C) adipokines—regulate the production of red blood cells
- D) steroids—bulk up one's muscles

Answer: D

Difficulty: 2 Medium Page Ref: 60

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Endocrine System

Learning Objective: Describe the function of the endocrine system.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

69) Which of the following statements is TRUE regarding hormone replacement therapy as a treatment for menopausal symptoms?

- A) It is used less frequently now than in the past.
- B) It is the only treatment that does not have any side effects.
- C) Its benefits outweigh its risks.
- D) It has become increasingly popular.

Answer: A

Difficulty: 2 Medium Page Ref: 60

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Endocrine System

Learning Objective: Describe the function of the endocrine system.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

70) Aarav, Liang's friend, is considering using steroids to increase muscle mass. Liang warns him that steroid abuse can lead to

- A) violent, dangerous behavior.
- B) Crohn's disease.
- C) loss of eyesight.
- D) type II diabetes.

Answer: A

Difficulty: 3 Hard Page Ref: 61

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Endocrine System

Learning Objective: Describe the function of the endocrine system.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

71) Gabriel suffers from seizures. His doctor tells him that he needs to get a brain scan. Which of the following techniques is the doctor most likely to suggest?

- A) electroencephalography (EEG)
- B) electromyography (EMG)
- C) adrenocorticotrophic hormone (ACTH) test
- D) reticulocyte index (RI) test

Answer: A

Difficulty: 3 Hard Page Ref: 63

Section: 7: The Brain

Topic: Brain Imaging

Learning Objective: Explain the techniques used to map and study the brain.

Bloom's: Apply

APA Outcome: 1.3: Describe applications of psychology

72) Which brain-scanning technique below is CORRECTLY matched with its description?

- A) EEG—records the brain's electrical activity with electrodes
- B) PET—causes a momentary interruption of the brain's electrical activity
- C) fMRI—traces biochemical activity in the brain
- D) TMS—produces a graph of electrical wave patterns

Answer: A

Difficulty: 2 Medium Page Ref: 63

Section: 7: The Brain

Topic: Brain Imaging

Learning Objective: Explain the techniques used to map and study the brain.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains; 2.2: Demonstrate psychology information literacy

73) Which of the following is a diagnostic use of the brain-scanning technique electroencephalography (EEG)?

- A) It facilitates the diagnosis of epilepsy and learning disorders.
- B) It facilitates the diagnosis and treatment of schizophrenia.
- C) It improves the diagnosis of strokes and multiple sclerosis.
- D) It facilitates the diagnosis of nervous system disorders such as Alzheimer's disease.

Answer: A

Difficulty: 2 Medium Page Ref: 63

Section: 7: The Brain

Topic: Brain Imaging

Learning Objective: Explain the techniques used to map and study the brain.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

74) Brent takes part in an experiment in his university's cognitive neuroscience laboratory. He silently reads rapid sequences of words flashed on a computer screen. Simultaneously, the electrical activity of his brain is recorded through skull electrodes. The brain-scanning technique used in this study is

- A) electromyography (EMG).
- B) positron emission tomography (PET).
- C) electroencephalography (EEG).
- D) functional magnetic resonance imaging (fMRI).

Answer: C

Difficulty: 3 Hard Page Ref: 63

Section: 7: The Brain

Topic: Brain Imaging

Learning Objective: Explain the techniques used to map and study the brain.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

75) The newest brain-scanning technique which is popularly used is

- A) PET.
- B) EEG.
- C) TMS.
- D) fMRI.

Answer: C

Difficulty: 1 Easy Page Ref: 64

Section: 7: The Brain

Topic: Brain Imaging

Learning Objective: Explain the techniques used to map and study the brain.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

76) Marisol is trying a new treatment for severe depression. Brief magnetic pulses are sent through her brain. Marisol is undergoing

- A) optogenetic therapy.
- B) transcranial magnetic stimulation.
- C) positron emission tomography.
- D) functional magnetic resonance imaging.

Answer: B

Difficulty: 2 Medium Page Ref: 65

Section: 7: The Brain

Topic: Brain Imaging

Learning Objective: Explain the techniques used to map and study the brain.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains; 1.3: Describe applications of psychology

77) Emma, a professor, is describing an emerging method in the field of brain examination. This field involves genetic engineering and the use of special types of light to view individual circuits of neurons. Emma is most likely describing

- A) optogenetics.
- B) synaptic reflectance.
- C) amniocentesis.
- D) myelography.

Answer: A

Difficulty: 2 Medium Page Ref: 65

Section: 7: The Brain

Topic: Brain Imaging

Learning Objective: Explain the techniques used to map and study the brain.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

78) Sofiya is learning about the human brain. Her teacher asks her to identify a part of the brain's central core. Which of the following should she choose?

- A) cerebral cortex
- B) cerebellum
- C) hypothalamus
- D) spinal cord

Answer: B

Difficulty: 2 Medium Page Ref: 66

Section: 7: The Brain

Topic: Brain Structure

Learning Objective: Identify the brain's structures.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

79) Which of the following is a part of the hindbrain that monitors feedback from the muscles to coordinate their placement, movement, and tension?

- A) cerebral cortex
- B) hypothalamus
- C) pons
- D) cerebellum

Answer: D

Difficulty: 2 Medium Page Ref: 66

Section: 7: The Brain

Topic: Brain Structure

Learning Objective: Describe the brain's functions by structure.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

80) The part of the brain closest to the spinal cord is the _____; it is important for functions such as _____.

- A) hypothalamus; handling incoming and outgoing signals
- B) cerebellum; heart rate and respiration
- C) thalamus; regulating basic biological needs
- D) medulla; heartbeat and breathing

Answer: D

Difficulty: 1 Easy Page Ref: 66

Section: 7: The Brain

Topic: Brain Structure

Learning Objective: Identify the brain's structures.; Describe the brain's functions by structure.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

81) Tamar is learning about the human brain. Her teacher asks her to identify the part of the brain that integrates movement between the left and right halves of the body. Which of the following should Tamar choose?

- A) pituitary gland
- B) reticular formation
- C) pons
- D) medulla

Answer: C

Difficulty: 2 Medium Page Ref: 66

Section: 7: The Brain

Topic: Brain Function

Learning Objective: Describe the brain's functions by structure.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

82) Which of the following parts of the brain controls bodily balance?

- A) hypothalamus
- B) pons
- C) thalamus
- D) cerebellum

Answer: D

Difficulty: 2 Medium Page Ref: 66

Section: 7: The Brain

Topic: Brain Structure

Learning Objective: Describe the brain's functions by structure.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

83) Diego has been drinking. He has difficulty walking in a straight line. It is most likely that Diego's _____ is functioning poorly.

- A) pituitary gland
- B) cerebellum
- C) hypothalamus
- D) medulla

Answer: B

Difficulty: 2 Medium Page Ref: 66

Section: 7: The Brain

Topic: Brain Function

Learning Objective: Describe the brain's functions by structure.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains; 1.3: Describe applications of psychology

84) Which of the following parts of the brain extends from the medulla through the pons and is made up of groups of nerve cells that can immediately activate other parts of the brain to produce general bodily arousal?

- A) reticular formation
- B) pituitary gland
- C) cerebellum
- D) pons

Answer: A

Difficulty: 2 Medium Page Ref: 67

Section: 7: The Brain

Topic: Brain Structure

Learning Objective: Describe the brain's functions by structure.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

85) The thalamus may be likened to a(n)

- A) amplifier.
- B) receiver.
- C) filter.
- D) relay station.

Answer: D

Difficulty: 2 Medium Page Ref: 67

Section: 7: The Brain

Topic: Brain Function

Learning Objective: Describe the brain's functions by structure.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

86) Identify the part of the brain that is located in the middle of the central core and acts primarily to relay information about the senses.

- A) thalamus
- B) corpus callosum
- C) reticular formation
- D) amygdala

Answer: A

Difficulty: 1 Easy Page Ref: 67

Section: 7: The Brain

Topic: Brain Structure

Learning Objective: Describe the brain's functions by structure.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

87) Which of the following parts of the brain maintains homeostasis and produces and regulates vital behavior such as eating, drinking, and sexual behavior?

- A) thalamus
- B) pons
- C) amygdala
- D) hypothalamus

Answer: D

Difficulty: 2 Medium Page Ref: 67

Section: 7: The Brain

Topic: Brain Function

Learning Objective: Describe the brain's functions by structure.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

88) Pizza! Beer! Sex! Our motivation or drive for such things is based on the activity of the brain region known as the

- A) hypothalamus.
- B) thalamus.
- C) hippocampus.
- D) amygdala.

Answer: A

Difficulty: 1 Easy Page Ref: 67

Section: 7: The Brain

Topic: Brain Function

Learning Objective: Describe the brain's functions by structure.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains; 1.3: Describe applications of psychology

89) The _____ maintains a steady internal environment for the body.

- A) thalamus
- B) amygdala
- C) hypothalamus
- D) hippocampus

Answer: C

Difficulty: 1 Easy Page Ref: 67

Section: 7: The Brain

Topic: Brain Function

Learning Objective: Describe the brain's functions by structure.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

90) The _____ in the brain contributes to the body's maintenance of a steady internal physiological state called _____.

- A) thalamus; homeostasis
- B) hypothalamus; homeostasis
- C) hippocampus; equilibrium
- D) thalamus; equilibrium

Answer: B

Difficulty: 2 Medium Page Ref: 67

Section: 7: The Brain

Topic: Brain Function

Learning Objective: Describe the brain's functions by structure.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

91) The limbic system contains which of the following structures?

- A) amygdala
- B) pons
- C) thalamus
- D) corpus callosum

Answer: A

Difficulty: 1 Easy Page Ref: 67

Section: 7: The Brain

Topic: Limbic System

Learning Objective: Describe the limbic system's key structure and functions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

92) The structures of the _____ jointly control a variety of basic functions relating to emotions and self-preservation such as eating, aggression, and reproduction.

- A) central core of the brain
- B) endocrine system
- C) limbic system
- D) cerebral cortex

Answer: C

Difficulty: 1 Easy Page Ref: 67

Section: 7: The Brain

Topic: Limbic System

Learning Objective: Describe the limbic system's key structure and functions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

93) Santiago undergoes surgery to control his severe epilepsy. After the surgery, Santiago is unable to form new memories of his experiences, although he remembers past events. The surgery has most likely destroyed a portion of the _____ in Santiago's brain.

- A) amygdala
- B) hypothalamus
- C) pons
- D) hippocampus

Answer: D

Difficulty: 3 Hard Page Ref: 68

Section: 7: The Brain

Topic: Limbic System

Learning Objective: Describe the limbic system's key structure and functions.

Bloom's: Apply

APA Outcome: 1.3: Describe applications of psychology

94) The _____ is referred to as the "new brain."

- A) hindbrain
- B) limbic system
- C) cerebral cortex
- D) central core

Answer: C

Difficulty: 1 Easy Page Ref: 68

Section: 7: The Brain

Topic: Cerebral Cortex

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

95) Which of the following sequences correctly identifies the orders of the lobes of the cortex, from anterior to posterior?

- A) frontal → temporal and parietal → posterior
- B) occipital → temporal and parietal → frontal
- C) frontal → occipital → temporal and parietal
- D) frontal → temporal and parietal → occipital

Answer: D

Difficulty: 2 Medium Page Ref: 68

Section: 7: The Brain

Topic: Cerebral Cortex

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

96) Identify the lobe of the brain in which the motor area is located.

- A) occipital lobe
- B) frontal lobe
- C) temporal lobe
- D) limbic lobe

Answer: B

Difficulty: 1 Easy Page Ref: 68

Section: 7: The Brain

Topic: Cerebral Cortex

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

97) Which of the following areas is the part of the cerebral cortex that is largely responsible for the body's voluntary movement?

- A) the sensory area
- B) the auditory area
- C) the motor area
- D) the temporal area

Answer: C

Difficulty: 1 Easy Page Ref: 69

Section: 7: The Brain

Topic: Cerebral Cortex

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

98) In a neurophysiological investigation, a monkey makes an involuntary gesture when a portion of its brain is electrically stimulated. The area of the brain that was most likely stimulated is the

- A) parietal lobe.
- B) frontal lobe.
- C) temporal lobe.
- D) occipital lobe.

Answer: B

Difficulty: 2 Medium Page Ref: 69

Section: 7: The Brain

Topic: Cerebral Cortex

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains; 1.1: Describe key concepts, principles, and overarching themes in psychology

99) Which of the following areas is defined as the site in the brain of the tissue that corresponds to each of the senses, with the degree of sensitivity related to the amount of tissue?

- A) the attribution area
- B) the sensory area
- C) Broca's area
- D) the motor area

Answer: B

Difficulty: 1 Easy Page Ref: 70

Section: 7: The Brain

Topic: Cerebral Cortex

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

100) Noah gets hit on the head while playing football. He sustains a serious head injury that results in hindered facial movements. The area of the brain affected by the injury is the

- A) motor area.
- B) somatosensory area.
- C) visual area.
- D) auditory association area.

Answer: A

Difficulty: 3 Hard Page Ref: 69

Section: 7: The Brain

Topic: Cerebral Cortex

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

101) The somatosensory area is to the auditory area what the _____ lobe is to the _____ lobe.

- A) temporal; superior
- B) limbic; occipital
- C) superior; limbic
- D) parietal; temporal

Answer: D

Difficulty: 2 Medium Page Ref: 70

Section: 7: The Brain

Topic: Cerebral Cortex

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

102) Which of the following regions is associated with the visual area in the cortex?

- A) frontal lobe
- B) occipital lobe
- C) limbic lobe
- D) superior lobe

Answer: B

Difficulty: 1 Easy Page Ref: 70

Section: 7: The Brain

Topic: Cerebral Cortex

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

103) The brain injury suffered by 19th-century railroad worker Phineas Gage allowed psychologists to learn about the functions of the brain's

- A) association areas.
- B) central core.
- C) limbic system.
- D) sensory areas.

Answer: A

Difficulty: 1 Easy Page Ref: 70

Section: 7: The Brain

Topic: Cerebral Cortex

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains; 1.1: Describe key concepts, principles, and overarching themes in psychology

104) The _____ areas are considered to be the site of higher mental processes such as thinking, language, memory, and speech.

- A) sensory
- B) attribution
- C) motor
- D) association

Answer: D

Difficulty: 2 Medium Page Ref: 70

Section: 7: The Brain

Topic: Cerebral Cortex

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains; 1.1: Describe key concepts, principles, and overarching themes in psychology

105) Lukas takes part in an experiment. He is subject to electrical brain stimulation. He reports to the researcher conducting the experiment that he hears clicks during the stimulation. The part of the brain that causes him to hear the sounds is known as the

- A) attribution area.
- B) auditory area.
- C) association area.
- D) assessment area.

Answer: B

Difficulty: 3 Hard Page Ref: 70

Section: 7: The Brain

Topic: Cerebral Cortex

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Apply

APA Outcome: 1.3: Describe applications of psychology

106) Which of the following is an executive function that is controlled by the association areas of the cortex?

- A) recalling information
- B) setting goals
- C) calculating expenses
- D) speaking clearly

Answer: B

Difficulty: 1 Easy Page Ref: 70

Section: 7: The Brain

Topic: Cerebral Cortex

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

107) Violet had a road accident. The injuries sustained from the accident resulted in slow and labored speech. However, she can understand others' speech. Violet has

- A) Broca's aphasia.
- B) Wernicke's aphasia.
- C) Crohn's disease.
- D) Turner syndrome.

Answer: A

Difficulty: 3 Hard Page Ref: 70

Section: 7: The Brain

Topic: Cerebral Cortex

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Apply

APA Outcome: 1.3: Describe applications of psychology

108) Warren suffers from Wernicke's aphasia. Which of the following difficulties will he experience?

- A) Warren will experience an inability to recognize faces.
- B) Warren will have difficulty recognizing objects visually.
- C) Warren will have trouble producing fluent speech.
- D) Warren will experience difficulty understanding language.

Answer: D

Difficulty: 2 Medium Page Ref: 71

Section: 7: The Brain

Topic: Cerebral Cortex

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains; 1.3: Describe applications of psychology

109) Which of the following terms is defined as the brain's ability to change throughout the life span through the addition of new neurons, new interconnections between neurons, and the reorganization of information-processing areas?

- A) neurotransmission
- B) neuroplasticity
- C) neuropraxia
- D) neuromutability

Answer: B

Difficulty: 1 Easy Page Ref: 71

Section: 7: The Brain

Topic: Neuroplasticity

Learning Objective: Describe plasticity and the brain's capacity for recovery and repair.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

110) Kathem learns that new neurons are created in certain areas of the brain during adulthood. Each day, thousands of new neurons are created, especially in areas of the brain related to learning and memory. This process is known as

- A) neurogenesis.
- B) neuroadaptation.
- C) neuroblastoma.
- D) neuroencephalopathy.

Answer: A

Difficulty: 2 Medium Page Ref: 71

Section: 7: The Brain

Topic: Neuroplasticity

Learning Objective: Describe plasticity and the brain's capacity for recovery and repair.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

111) Neurogenesis is especially evident in brain areas related to learning and memory. Based on this statement, it can be said that neurogenesis is particularly prevalent in the brain's

- A) medulla.
- B) pons.
- C) hippocampus.
- D) hypothalamus.

Answer: C

Difficulty: 2 Medium Page Ref: 68

Section: 7: The Brain

Topic: Neuroplasticity

Learning Objective: Describe plasticity and the brain's capacity for recovery and repair.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

112) Which of the following is TRUE about the brain?

- A) New research has confirmed that no new brain cells are created after childhood.
- B) The interconnections between neurons become less complex throughout life.
- C) Specific experience can modify the way in which information is processed.
- D) The brain does not have the ability to shift functions to different locations in cases of surgery.

Answer: C

Difficulty: 2 Medium Page Ref: 71

Section: 7: The Brain

Topic: Neuroplasticity

Learning Objective: Describe plasticity and the brain's capacity for recovery and repair.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

113) The use of stem cells in research and treatment remains controversial because stem cells come from

- A) nonhuman species.
- B) aborted fetuses.
- C) genetic engineering in the laboratory.
- D) paid adult donors.

Answer: B

Difficulty: 1 Easy Page Ref: 72

Section: 7: The Brain

Topic: Neuroplasticity

Learning Objective: Describe plasticity and the brain's capacity for recovery and repair.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

114) Which of the following statements is most accurate in the context of lateralization of language?

- A) It is most likely left-lateralized.
- B) It is most likely right-lateralized.
- C) The control of language is shared equally between the hemispheres.
- D) The lateralization of language varies dramatically from one person to another.

Answer: A

Difficulty: 1 Easy Page Ref: 73

Section: 7: The Brain

Topic: Specialization of Hemispheres

Learning Objective: Explain what split-brain research reveals about the functions of the brain's two hemispheres.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains; 1.1: Describe key concepts, principles, and overarching themes in psychology

115) Trevor is scratching his head, trying desperately to solve a verbal analogy as part of a standardized entrance examination; Sienna, meanwhile, is giving an oral presentation in a political science class. Of the brain's hemispheres, Trevor's _____ hemisphere is most active; Sienna's _____ hemisphere is most active.

- A) right; right
- B) left; left
- C) right; left
- D) left; right

Answer: B

Difficulty: 3 Hard Page Ref: 73

Section: 7: The Brain

Topic: Specialization of Hemispheres

Learning Objective: Explain what split-brain research reveals about the functions of the brain's two hemispheres.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

116) Kate is a right-handed person. She has suffered damage to the right side of her brain. Which of the following processes is LEAST likely to be affected?

- A) rearranging her living room furniture for aesthetic appeal
- B) balancing her checkbook
- C) reading that look on her boyfriend's face
- D) enjoying a new, catchy song on the radio

Answer: B

Difficulty: 2 Medium Page Ref: 73

Section: 7: The Brain

Topic: Specialization of Hemispheres

Learning Objective: Explain what split-brain research reveals about the functions of the brain's two hemispheres.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains; 1.3:

Describe applications of psychology

117) Itsuki is a split-brain patient. He finds simple tasks such as choosing an outfit or taking a shower difficult. The part of Itsuki's brain that is most likely injured is

- A) a bundle of fibers connecting the hemispheres of the brain.
- B) a nerve network in the brain that extends from the medulla.
- C) a part of the brain located in the middle of the central core.
- D) a part of the brain that controls bodily balance.

Answer: A

Difficulty: 3 Hard Page Ref: 75

Section: 7: The Brain

Topic: Specialization of Hemispheres

Learning Objective: Explain what split-brain research reveals about the functions of the brain's two hemispheres.

Bloom's: Apply

APA Outcome: 1.3: Describe applications of psychology

118) Ramona is a woman. Stefan is a man. Which of the following statements is TRUE regarding potential differences in the corpus callosum between these two individuals?

- A) Stefan's corpus callosum is probably the same size as Ramona's.
- B) Ramona's corpus callosum is larger than Stefan's.
- C) Ramona's corpus callosum is slightly smaller than Stefan's.
- D) Stefan's corpus callosum is much larger than Ramona's.

Answer: B

Difficulty: 2 Medium Page Ref: 74

Section: 7: The Brain

Topic: Specialization of Hemispheres

Learning Objective: Explain what split-brain research reveals about the functions of the brain's two hemispheres.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

119) Which of the following generalizations is probably most accurate regarding potential gender differences in the lateralization of language?

- A) No gender differences in the lateralization of language have been found.
- B) Language is more strongly left-lateralized among females than among males.
- C) Language is more strongly left-lateralized among males than among females.
- D) The lateralization of language is variable from one person to another.

Answer: C

Difficulty: 2 Medium Page Ref: 74

Section: 7: The Brain

Topic: Specialization of Hemispheres

Learning Objective: Explain what split-brain research reveals about the functions of the brain's two hemispheres.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

120) People whose corpus callosum has been surgically cut to stop seizures are called

- A) deep-brain patients.
- B) dual brain patients.
- C) split-brain patients.
- D) bicameral patients.

Answer: C

Difficulty: 1 Easy Page Ref: 75

Section: 7: The Brain

Topic: Split Brain

Learning Objective: Explain what split-brain research reveals about the functions of the brain's two hemispheres.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

121) Mrs. Simon has learned to lessen the pain associated with her migraine headaches by voluntarily relaxing specific muscles and reducing her blood pressure. This example illustrates

- A) deep-brain stimulation.
- B) biofeedback.
- C) split-brain control.
- D) transcranial stimulation.

Answer: B

Difficulty: 1 Easy Page Ref: 76

Section: 7: The Brain

Topic: Biofeedback

Learning Objective: Identify the brain's structures.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains; 1.3: Describe applications of psychology

122) The _____ is an insulating coat of fat and protein wrapped around an axon.

Answer: myelin sheath

Difficulty: 2 Medium Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurons

Learning Objective: Identify the parts of a neuron.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

123) According to the _____ law, neurons are either on or off.

Answer: all-or-none

Difficulty: 2 Medium Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: How Neurons Fire

Learning Objective: Identify the parts of a neuron.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

124) At the cellular level, our ability to empathize with others may reflect the activity of _____ neurons.

Answer: mirror

Difficulty: 2 Medium Page Ref: 50

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Mirror Neurons

Learning Objective: Identify the parts of a neuron.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

125) _____ is a chemical message that prevents or decreases the likelihood that a receiving neuron will fire.

Answer: Inhibitory message

Difficulty: 2 Medium Page Ref: 52

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurotransmitters

Learning Objective: Describe how nerve cells communicate with other nerve cells.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

126) After a long run, Aaron sometimes experiences a feeling of euphoria, a "runners' high," reflecting the activity of neurotransmitters called _____.

Answer: endorphins

Difficulty: 2 Medium Page Ref: 54

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurotransmitters

Learning Objective: Identify the key neurotransmitters and their functions.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

127) _____ neurons transmit information from the perimeter of the body to the central nervous system.

Answer: Afferent

Difficulty: 3 Hard Page Ref: 55

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Central Nervous System

Learning Objective: Describe how nerve cells communicate with other nerve cells.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

128) The somatic nervous system regulates voluntary movement; in contrast, the _____ nervous system underlies involuntary movement.

Answer: autonomic

Difficulty: 2 Medium Page Ref: 57

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Peripheral Nervous System

Learning Objective: Describe how nerve cells communicate with other nerve cells.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

129) Arif's heart rate and respiration are slowing, and his dilated pupils are contracting. His _____ nervous system has become active.

Answer: parasympathetic

Difficulty: 2 Medium Page Ref: 57

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Autonomic Division

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

130) _____ is the branch of psychology that seeks to identify how behavior is influenced and produced by our genetic inheritance from our ancestors.

Answer: Evolutionary psychology

Difficulty: 1 Easy Page Ref: 59

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Evolutionary Foundations of Nervous System

Learning Objective: Explain how genetics increases our understanding of behavior.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

131) The tiny _____ gland is known as the "master gland."

Answer: pituitary

Difficulty: 1 Easy Page Ref: 59

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Endocrine System

Learning Objective: Describe the function of the endocrine system.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

132) A technique called _____ records the brain's electrical activity through electrodes.

Answer: EEG (electroencephalogram)

Difficulty: 1 Easy Page Ref: 63

Section: 7: The Brain

Topic: Brain Imaging

Learning Objective: Explain the techniques used to map and study the brain.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

133) Wilma has been experiencing memory difficulties, and her doctor is concerned that Wilma may have a brain tumor. He recommends a(n) _____ to confirm his diagnosis.

Answer: PET (positron emission tomography)

Difficulty: 2 Medium Page Ref: 64

Section: 7: The Brain

Topic: Brain Imaging

Learning Objective: Explain the techniques used to map and study the brain.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains; 1.3: Describe applications of psychology

134) Extending from the medulla, through the midbrain, into the forebrain is the _____, which serves to regulate general bodily arousal.

Answer: reticular formation

Difficulty: 2 Medium Page Ref: 67

Section: 7: The Brain

Topic: Brain Function

Learning Objective: Identify the brain's structures.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

135) Information travels from our sensory receptors to the _____ in the brain, which relays it to higher association areas.

Answer: thalamus

Difficulty: 2 Medium Page Ref: 67

Section: 7: The Brain

Topic: Brain Function

Learning Objective: Identify the brain's structures.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

136) The amygdala and hippocampus are found within the brain's _____ system.

Answer: limbic

Difficulty: 1 Easy Page Ref: 67

Section: 7: The Brain

Topic: Limbic System

Learning Objective: Describe the limbic system's key structure and functions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

137) Epileptics have sometimes had portions of their limbic system removed. Subsequent memory problems may reflect damage to the _____.

Answer: hippocampus

Difficulty: 2 Medium Page Ref: 67

Section: 7: The Brain

Topic: Limbic System

Learning Objective: Describe the limbic system's key structure and functions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

138) The cortex has four major sections called _____.

Answer: lobes

Difficulty: 2 Medium Page Ref: 68

Section: 7: The Brain

Topic: Cerebral Cortex

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

139) The _____ area in the parietal lobe encompasses specific locations associated with the ability to perceive touch and pressure in a particular area of the body.

Answer: somatosensory

Difficulty: 2 Medium Page Ref: 70

Section: 7: The Brain

Topic: Cerebral Cortex

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

140) New neurons are created even during adulthood, in a process called _____.

Answer: neurogenesis

Difficulty: 2 Medium Page Ref: 71

Section: 7: The Brain

Topic: Neuroplasticity

Learning Objective: Describe plasticity and the brain's capacity for recovery and repair.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

141) Vance has learned to voluntarily control the activation of his autonomic nervous system as part of the treatment for an anxiety disorder. This is an example of _____.

Answer: biofeedback

Difficulty: 2 Medium Page Ref: 76

Section: 7: The Brain

Topic: Biofeedback

Learning Objective: Describe plasticity and the brain's capacity for recovery and repair.

Bloom's: Apply

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains; 1.3: Describe applications of psychology

142) Draw a typical neuron and label its major parts accurately. Briefly describe the functions of the parts labeled on your diagram.

Answer: The drawing should contain: (a) dendrites, which should appear as clusters of branch like extensions from the cell body; (b) the cell body, which should appear as a roundish structure in the center of the diagram; (c) the axon, which should appear as a long tube extending from the cell body; and (d) myelin, which should appear bracketing portions of the axon. The diagram should also include a terminal button, a bulb like ending to the axon. The function of the following structures should be described. Dendrites—receive information from other neurons. Axon—sends message to another neuron.

Myelin—insulates one axon from another and speeds neural transmission.

Difficulty: 2 Medium Page Ref: 47

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurons

Learning Objective: Identify the parts of a neuron.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains; 1.1: Describe key concepts, principles, and overarching themes in psychology

143) Briefly describe the functions of glial cells.

Answer: Students' answers may vary.

Neurons are physically held in place by glial cells. Glial cells provide nourishment to neurons, insulate them, help repair damage, and generally support neural functioning.

Difficulty: 1 Easy Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurons

Learning Objective: Identify the parts of a neuron.

Bloom's: Understand

APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology

144) Identify the factors that determine the speed at which an action potential travels along an axon.

Answer: Students' answers may vary.

The particular speed at which an action potential travels along an axon is determined by the axon's size and the thickness of its myelin sheath. Axons with small diameters carry impulses at about 2 miles per hour; longer and thicker ones can average speeds of more than 225 miles per hour.

Difficulty: 1 Easy Page Ref: 48

Section: 5: Neurons: The Basic Elements of Behavior

Topic: How Neurons Fire

Learning Objective: Explain how neurons transmit information.

Bloom's: Understand

APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology

145) Briefly describe mirror neurons.

Answer: Mirror neurons are neurons that fire not only when a person enacts a particular behavior but also when a person simply observes another individual carrying out the same behavior. Mirror neurons may help explain how (and why) humans have the capacity to understand others' intentions. Specifically, mirror neurons may fire when we view someone doing something, helping us to predict what their goals are and what they may do next. The discovery of mirror neurons suggests that the capacity of even young children to imitate others may be an inborn behavior. Furthermore, mirror neurons may be at the root of empathy—those feelings of concern, compassion, and sympathy for others—and even the development of language in humans.

Difficulty: 2 Medium Page Ref: 50

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Mirror Neurons

Learning Objective: Identify the parts of a neuron.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains; 1.1: Describe key concepts, principles, and overarching themes in psychology

146) Outline the sequence of events that occur at the synapse when a neural message is communicated.

Answer: The answer should include the following steps in the sequence: (1) neurotransmitters are produced and stored in the axon. An action potential reaches the end of the axon, or the terminal button; (2) if an action potential arrives, the potential stimulates the release of neurotransmitter molecules from vesicles within the terminal button; (3) the neurotransmitter molecules float passively across the gap between the terminal button of the sending neuron and the dendrites of the receiving neuron; (4) the molecules fit into specialized receptor sites on the dendrites of the receiving neuron; making (5) the receiving neuron either more or less likely to produce its own action potential, depending on the neurotransmitter.

Difficulty: 2 Medium Page Ref: 51

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Synapse

Learning Objective: Identify the parts of a neuron.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

147) What are neurotransmitters?

Answer: Neurotransmitters are chemicals that carry messages across the synapse to a dendrite (and sometimes the cell body) of a receiving neuron. The chemical mode of message transmission that occurs between neurons is strikingly different from the means by which communication occurs inside neurons: Although messages travel in electrical form within a neuron, they move between neurons through a chemical transmission system. There are several types of neurotransmitters, and not all neurons are capable of receiving the chemical message carried by a particular neurotransmitter. In the same way that a jigsaw puzzle piece can fit in only one specific location in a puzzle, each kind of neurotransmitter has a distinctive configuration that allows it to fit into a specific type of receptor site on the receiving neuron. It is only when a neurotransmitter fits precisely into a receptor site that successful chemical communication is possible.

If a neurotransmitter does fit into a site on the receiving neuron, the chemical message it delivers is basically one of two types: excitatory or inhibitory.

Difficulty: 1 Easy Page Ref: 51

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurotransmitters

Learning Objective: Identify the key neurotransmitters and their functions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

148) Identify and describe any three neurotransmitters, using specific examples.

Answer: Students' answers may vary.

The answer should include three of the following neurotransmitters. At least one of the functions or domains listed for each of the three neurotransmitters should be mentioned, ideally in a personalized example.

Acetylcholine—movement of skeletal muscles; memory

Glutamate—memory

GABA—eating and aggression; affected by alcohol

Dopamine—involved in movement, attention, learning, and reinforcement

Serotonin—regulates sleep, mood, eating, and depression

Endorphins—the brain's natural painkiller; may produce euphoric feelings

Difficulty: 2 Medium Page Ref: 53

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurotransmitters

Learning Objective: Identify the key neurotransmitters and their functions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

149) Identify how abnormal levels of specific neurotransmitters may be involved in each of these disorders: Alzheimer's disease, Parkinson's disease, and schizophrenia.

Answer: The answer should include the following:

Alzheimer's disease—diminished production of acetylcholine

Parkinson's disease—abnormally low levels of dopamine

Schizophrenia—abnormally high levels of dopamine

Difficulty: 1 Easy Page Ref: 52

Section: 5: Neurons: The Basic Elements of Behavior

Topic: Neurotransmitters

Learning Objective: Identify the key neurotransmitters and their functions.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

150) Briefly describe the peripheral nervous system.

Answer: The peripheral nervous system branches out from the spinal cord and brain and reaches the extremities of the body. Made up of neurons with long axons and dendrites, the peripheral nervous system encompasses all the parts of the nervous system other than the brain and spinal cord. There are two major divisions—the somatic division and the autonomic division—both of which connect the central nervous system with the sense organs, muscles, glands, and other organs.

The somatic division specializes in the control of voluntary movements—such as the motion of the eyes to read this sentence or those of the hand to turn this page—and the communication of information to and from the sense organs. The autonomic division controls the parts of the body that keep us alive—the heart, blood vessels, glands, lungs, and other organs that function involuntarily without our awareness.

Difficulty: 2 Medium Page Ref: 57

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Peripheral Nervous System

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains; 1.1:

Describe key concepts, principles, and overarching themes in psychology

151) Distinguish between the sympathetic and the parasympathetic divisions of the autonomic nervous system. For each division, provide an example of a situation in which the division would become active. Describe the effects on several bodily processes of the activity of each division.

Answer: Students' examples may vary.

The answer should contain the following information:

The sympathetic nervous system acts to prepare the body for action in stressful situations by mobilizing the organism's resources for "fight or flight."

The parasympathetic nervous system acts to calm the body once a stressful situation or emergency has ended. It allows the body to store energy.

The sympathetic nervous system becomes active in such "fight-or-flight" situations as spotting a threatening stranger in a desolate parking garage, being involved in a near-accident on the road, and so on.

The parasympathetic nervous system becomes active in calm, restful situations such as relaxing after dinner or resting in bed before falling asleep.

Signs of sympathetic nervous system activity are increased heart rate, inhibited digestion, dilated pupils, shallow breathing.

Signs of parasympathetic nervous system activity are decreased heart rate, facilitated digestion, constricted pupils, slowed respiration.

Difficulty: 2 Medium Page Ref: 57

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Autonomic Division

Learning Objective: Explain the functions of the nervous system's main divisions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

152) What is evolutionary psychology? Summarize the arguments of evolutionary psychologists in the field of psychology.

Answer: Evolutionary psychology is the branch of psychology that seeks to identify how behavior is influenced and produced by our genetic inheritance from our ancestors. Evolutionary psychologists argue that the course of evolution is reflected in the structure and functioning of the nervous system and that evolutionary factors consequently have a significant influence on our everyday behavior. Their work, in conjunction with the research of scientists studying genetics, biochemistry, and medicine, has led to an understanding of how our behavior is affected by heredity, our genetically determined heritage. Evolutionary psychologists have spawned a new and increasingly influential field: behavioral genetics.

Difficulty: 2 Medium Page Ref: 59

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Evolutionary Foundations of Nervous System

Learning Objective: Explain how genetics increases our understanding of behavior.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

153) Discuss behavioral genetics.

Answer: Students' answers may vary.

Behavioral genetics is the study of the effects of heredity on behavior. Consistent with the evolutionary perspective, behavioral genetics researchers are finding increasing evidence that cognitive abilities, personality traits, sexual orientation, and psychological disorders are determined to some extent by genetic factors.

Difficulty: 2 Medium Page Ref: 59

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Evolutionary Foundations of Nervous System

Learning Objective: Explain how genetics increases our understanding of behavior.

Bloom's: Understand

APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology

154) Briefly describe the functions of endocrine system and the pituitary gland.

Answer: Students' answers may vary.

The endocrine system is a chemical communication network that sends messages throughout the body via the bloodstream.

Its job is to secrete hormones, chemicals that circulate through the blood and regulate the functioning or growth of the body. It also influences—and is influenced by—the functioning of the nervous system. Although the endocrine system is not part of the brain, it is closely linked to the hypothalamus.

A key component of the endocrine system is the tiny pituitary gland, which is found near—and regulated by—the hypothalamus in the brain. The pituitary gland has sometimes been called the "master gland" because it controls the functioning of the rest of the endocrine system. But the pituitary gland is more than just the taskmaster of other glands; it has important functions in its own right.

For instance, hormones secreted by the pituitary gland control growth. Extremely short people and unusually tall ones usually have pituitary gland abnormalities.

Difficulty: 2 Medium Page Ref: 59

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Endocrine System

Learning Objective: Describe the function of the endocrine system.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

155) Briefly describe the functions of hormones.

Answer: Students' answers may vary.

The pituitary gland has sometimes been called the "master gland" because it controls the functioning of the rest of the endocrine system. But the pituitary gland is more than just the taskmaster of other glands; it has important functions in its own right. For instance, hormones secreted by the pituitary gland control growth. Extremely short people and unusually tall ones usually have pituitary gland abnormalities. Other endocrine glands affect emotional reactions, sexual urges, and energy levels.

Individual hormones perform many functions, depending on circumstances. For example, the hormone oxytocin is at the root of many of life's satisfactions and pleasures. In new mothers, oxytocin produces an urge to nurse newborn offspring. The same hormone also seems to stimulate cuddling between species members. And—at least in rats—it encourages sexually active males to seek out females more passionately and females to be more receptive to males' sexual advances. There's even evidence that oxytocin is related to the development of trust in others, helping to grease the wheels of effective social interaction.

Difficulty: 2 Medium Page Ref: 59

Section: 6: The Nervous System and the Endocrine System: Communicating Within the Body

Topic: Endocrine System

Learning Objective: Describe the function of the endocrine system.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

156) List and describe the brain-scanning techniques.

Answer: Three of the following techniques should be identified; a description of the diagnostic utility of each technique should follow.

Electroencephalogram (EEG)—facilitates the diagnosis of epilepsy and learning disabilities

Positron emission tomography (PET)—may help identify the presence of brain tumors

Functional magnetic resonance imaging (fMRI)—has improved the diagnosis of many ailments, including strokes, multiple sclerosis, and Alzheimer's disease

Transcranial magnetic stimulation (TMS) imaging—may allow the treatment of certain psychological disorders, such as depression and schizophrenia

Difficulty: 2 Medium Page Ref: 63-64

Section: 7: The Brain

Topic: Brain Imaging

Learning Objective: Explain the techniques used to map and study the brain.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

157) What is transcranial magnetic stimulation (TMS)? Why is it sometimes called a "virtual lesion"?

Answer: Students' answers may vary.

Transcranial magnetic stimulation (TMS) uses magnetic fields to produce an understanding of the functioning of the brain. One of the newest procedures used to study the brain, TMS is sometimes called a "virtual lesion" because it produces effects similar to what would occur if areas of the brain were physically cut. The enormous advantage of TMS is that the virtual cut is only temporary. In addition to identifying areas of the brain that are responsible for particular functions, TMS has the potential to treat certain kinds of psychological disorders, such as depression and schizophrenia, by shooting brief magnetic pulses through the brain.

Difficulty: 2 Medium Page Ref: 64

Section: 7: The Brain

Topic: Brain Imaging

Learning Objective: Explain the techniques used to map and study the brain.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

158) Identify and describe the "old brain" structures or areas. Illustrate the function of each area.

Answer: The "old brain" is the brain's central core. Three of the following structures should be identified. Damage or deterioration should lead to impairment of the function listed for a given area.

Medulla—regulates breathing and heart rate.

Pons—regulates sleep; coordinates movement between the right and left sides of the body.

Cerebellum—controls body balance; coordinates movement.

Reticular formation—regulates alertness; when awake, produces arousal to outside stimulation; when asleep, filters out distracting background stimuli.

Thalamus—acts as a relay station for information from the senses.

Hypothalamus—maintains homeostasis, a steady internal state for the body; produces and regulates survival-related behavior, such as eating, self-protection, and sex.

Difficulty: 2 Medium Page Ref: 66

Section: 7: The Brain

Topic: Brain Structure

Learning Objective: Describe the brain's functions by structure.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

159) What is the reticular formation? What are its functions?

Answer: Students' answers may vary.

The reticular formation is a nerve network in the brain that extends from the medulla through the pons, passing through the middle section of the brain, called the midbrain, and into the front-most part of the brain, called the forebrain. Like an ever-vigilant guard, the reticular formation produces general arousal of our body. If, for example, we are startled by a loud noise, the reticular formation can prompt a heightened state of awareness to determine whether a response is necessary. The reticular formation also helps regulate our sleep-wake cycle by filtering out background stimuli to allow us to sleep undisturbed.

Difficulty: 2 Medium Page Ref: 67

Section: 7: The Brain

Topic: Brain Structure

Learning Objective: Describe the brain's functions by structure.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

160) Describe briefly the limbic system.

Answer: Students' answers may vary.

The limbic system is the part of the brain that controls eating, aggression, and reproduction. Consisting of a series of doughnut-shaped structures that include the amygdala and hippocampus, the limbic system borders the top of the central core and has connections with the cerebral cortex.

The structures of the limbic system jointly control a variety of basic functions relating to emotions and self-preservation, such as eating, aggression, and reproduction. Injury to the limbic system can produce striking changes in behavior.

Difficulty: 2 Medium Page Ref: 67

Section: 7: The Brain

Topic: Limbic System

Learning Objective: Describe the limbic system's key structure and functions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

161) Oliver, a mild-mannered person, suffers a head injury. After the injury, he becomes violent and aggressive. What may have caused this change in his behavior?

Answer: Students' answers may vary.

The answer should contain the following information:

Oliver's change in behavior may have been caused by injury to the limbic system, which can produce striking changes in behavior. For example, injury to the amygdala, which is involved in fear and aggression, can turn animals that are usually docile and tame into belligerent savages. Conversely, animals that are usually wild and uncontrollable may become meek and obedient following injury to the amygdala.

Difficulty: 3 Hard Page Ref: 67

Section: 7: The Brain

Topic: Limbic System

Learning Objective: Describe the limbic system's key structure and functions.

Bloom's: Apply

APA Outcome: 1.3: Describe applications of psychology

162) Describe the cerebral cortex. Explain why it is referred to as the "new brain."

Answer: Students' answers may vary.

The cerebral cortex is the area of the brain that consists of a mass of deeply folded, rippled, convoluted tissue. Although only about 1/12 of an inch thick, it would, if flattened out, cover an area more than 2 feet square. This configuration allows the surface area of the cortex to be considerably greater than it would be if it were smoother and more uniformly packed into the skull. The uneven shape also permits a high level of integration of neurons, allowing sophisticated information processing.

It is referred to as the "new brain" because of its relatively recent evolution.

Difficulty: 2 Medium Page Ref: 68

Section: 7: The Brain

Topic: Cerebral Cortex

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

163) Describe the locations of the lobes of the cerebral cortex.

Answer: Students' answers may vary.

The cerebral cortex consists of four major sections called lobes. Each lobe has specialized areas that relate to particular functions. If we take a side view of the brain, the frontal lobes lie at the front center of the cortex and the parietal lobes lie behind them. The temporal lobes are found in the lower-center portion of the cortex, with the occipital lobes lying behind them. These four sets of lobes are physically separated by deep grooves called sulci.

Difficulty: 2 Medium Page Ref: 68

Section: 7: The Brain

Topic: Cerebral Cortex

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

164) Sofia had a portion of her brain removed when she was 5 months old to help treat her seizures. Three years after the surgery, her brain scans revealed that the other portions of her brain had taken over the functions of the part of the brain that was removed. What caused this phenomenon to occur?

Answer: Students' answers may vary.

The answer should contain the following information:

The success of Sofia's surgery illustrates that the brain has the ability to shift functions to different locations in cases of surgery. According to some new findings, the brain and nervous system have regenerative powers. Neuroplasticity refers to the brain's ability to change throughout the life span through the addition of new neurons, new interconnections between neurons, and the reorganization of information-processing areas.

Difficulty: 3 Hard Page Ref: 71

Section: 7: The Brain

Topic: Neuroplasticity

Learning Objective: Describe plasticity and the brain's capacity for recovery and repair.

Bloom's: Apply

APA Outcome: 1.3: Describe applications of psychology

165) Laura, a patient with a terminal illness, is in critical need of stem cells for her treatment. However, her doctor tells her that she may not be able to procure them easily. What could be the reason for this?

Answer: Students' answers may vary.

The answer should contain the following information:

Laura may not be able to easily procure stem cells for her treatment because the source of implanted stem cells typically is aborted fetuses, and their use is controversial. Some critics have argued that the use of stem cells in research and treatment should be prohibited, while supporters argue that the potential benefits of the research are so great that stem cell research should be unrestricted. The issue has been politicized, and the question of whether and how stem cell research should be regulated is not clear.

Difficulty: 3 Hard Page Ref: 72

Section: 7: The Brain

Topic: Neuroplasticity

Learning Objective: Describe plasticity and the brain's capacity for recovery and repair.

Bloom's: Apply

APA Outcome: 1.3: Describe applications of psychology

166) Briefly describe the two brain hemispheres and their functions.

Answer: Students' answers may vary.

The brain is divided into two roughly mirror-image halves: a left brain and a right brain. Because of the way nerves in the brain are connected to the rest of the body, these symmetrical left and right halves, called hemispheres, control motion in—and receive sensation from—the side of the body opposite their location. The left hemisphere of the brain, then, generally controls the right side of the body, and the right hemisphere controls the left side of the body. Thus, damage to the right side of the brain is typically indicated by functional difficulties in the left side of the body. Despite the appearance of similarity between the two hemispheres of the brain, they are somewhat different in the functions they control and in the ways they control them. Certain behaviors are more likely to reflect activity in one hemisphere than in the other, or are lateralized.

For example, the left hemisphere concentrates more on tasks that require verbal competence, such as speaking, reading, thinking, and reasoning. In addition, the left hemisphere tends to process information sequentially, one bit at a time.

The right hemisphere has its own strengths, particularly in nonverbal areas such as the understanding of spatial relationships, recognition of patterns and drawings, music, and emotional expression. The right hemisphere tends to process information globally, considering it as a whole. The degree and nature of lateralization vary from one person to another.

Difficulty: 2 Medium Page Ref: 73

Section: 7: The Brain

Topic: Cerebral Hemispheres

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

167) Review recent research investigating the effects of gender and culture on brain structure and function.

Answer: Young girls show earlier development in the frontal lobes, which control aggressiveness and language development. On the other hand, boys' brains develop faster in the visual region that facilitates visual and spatial tasks such as geometry. Furthermore, most males tend to show greater lateralization of language in the left hemisphere. For them, language is clearly relegated largely to the left side of the brain. In contrast, women display less lateralization, with language abilities apt to be more evenly divided between the two hemispheres. Such differences in brain lateralization may account, in part, for the superiority often displayed by female on certain measures of verbal skills, such as the onset and fluency of speech. Other research suggests that men's brains are somewhat bigger than women's brains even after taking differences in body size into account. In contrast, part of the corpus callosum, a bundle of fibers that connects the hemispheres of the brain, is proportionally larger in women than in men. Culture also gives rise to differences in brain lateralization. Native speakers of Japanese seem to process information regarding vowel sounds primarily in the brain's left hemisphere. In contrast, North and South Americans, Europeans, and individuals of Japanese ancestry who learn Japanese later in life handle vowel sounds principally in the right hemisphere. One explanation for this difference is that certain characteristics of the Japanese language, such as the ability to express complex ideas by using only vowel sounds, result in the development of a specific type of brain lateralization in native speakers.

Difficulty: 2 Medium Page Ref: 74

Section: 7: The Brain

Topic: Brain Function

Learning Objective: Identify the brain's structures.

Bloom's: Understand

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains

168) John is suffering from epileptic seizures. His doctor suggests that he undergo a surgical procedure to sever his corpus callosum. What is the purpose of such a procedure?

Answer: Students' answers may vary.

The corpus callosum is a bundle of fibers connecting the two hemispheres of the brain. In order to treat John's epileptic seizures, an experimental procedure can be performed on his brain where the corpus callosum can be surgically severed in order to stop the electrical impulses that cause seizures. Patients whose corpus callosum has been cut or injured are called split-brain patients.

Difficulty: 3 Hard Page Ref: 75

Section: 7: The Brain

Topic: Cerebral Hemispheres

Learning Objective: Describe the major areas of the cerebral cortex and their functions.

Bloom's: Apply

APA Outcome: 1.3: Describe applications of psychology

169) What is biofeedback? Describe the procedure and identify some of the physical and psychological disorders where it is applied.

Answer: Biofeedback is a procedure in which a person learns to control through conscious thought internal physiological processes such as blood pressure, heart and respiration rate, skin temperature, sweating, and the constriction of particular muscles. Although it traditionally had been thought that the heart rate, respiration rate, blood pressure, and other bodily functions are under the control of parts of the brain over which we have no influence, psychologists have discovered that these responses are actually susceptible to voluntary control.

In biofeedback, a person is hooked up to electronic devices that provide continuous feedback relating to the physiological response in question. For instance, someone trying to control headaches through biofeedback might have electronic sensors placed on certain muscles on her head and learn to control the constriction and relaxation of those muscles. Later, when she felt a headache starting, she could relax the relevant muscles and abort the pain.

Although the control of physiological processes through the use of biofeedback is not easy to learn, it has been employed with success in a variety of ailments, including emotional problems (such as anxiety, depression, phobias, tension headaches, insomnia, and hyperactivity), physical illnesses with a psychological component (such as asthma, high blood pressure, ulcers, muscle spasms, and migraine headaches), and physical problems.

Difficulty: 1 Easy Page Ref: 76

Section: 7: The Brain

Topic: Biofeedback

Learning Objective: Describe plasticity and the brain's capacity for recovery and repair.

Bloom's: Remember

APA Outcome: 1.2: Develop a working knowledge of psychology's content domains; 4.2: Exhibit effective presentation skills for different purposes