Invitation to Psychology 7th edition Wade Test Bank

SKU: 9780134550107-TEST-BANK

TOTAL ASSESSMENT GUIDE

Chapter 2

NEURONS, HORMONES, AND THE BRAIN

Section/ Learning Objective		Factual	Conceptual	Applied
POP QUIZ 1	Multiple Choice	1,3,4,5,6,7,8,9	10	2
POP QUIZ 2	Multiple Choice	2,4,5,7,8,9,10	1	3,6
The Nervous System: A Basic Blueprint 2.1.A – Describe the primary functions of the central nervous system, and name its two main structures. 2.1.B – List the major structures and major divisions of the peripheral nervous system, and describe their primary functions.	Multiple Choice	1,2,3,4,5,6,9,10,12,13, 14,15,17,18,19,20	7,21	8,11,16,22-26
	True/False	1-10,12-17	11	
	Short Answer		1,2,3,4	
	Essay	1,2		
	Integrative Essay			
Communication In The Nervous System 2.2.A – Compare the functions of neurons and glial cells. 2.2.B – Describe each of the three main parts of a neuron, and explain their functions. 2.2.C – Explain how stem cells contribute to the process of neurogenesis. 2.2.D – Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. 2.2.E – Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior.	Multiple Choice	27-42,45-49,51-54, 56-61,63,64,66,69,72, 74-83,85-107,109	50,55,62,65,67,68,70, 71,73,108	43,44,84
	True/False	18-60		
	Short Answer	5,6,7,8,10,11		9,12
	Essay	3,5	4,6	
	Integrative Essay		1	
Mapping The Brain 2.3.A – Describe three techniques researchers use for manipulating the brain and observing the behavior that results. 2.3.B – Describe five techniques researchers use for manipulating behavior and observing the effects on the brain.	Multiple Choice	110,111,112,113,115, 116,119,120,122,123, 124	125	114,117,118,121
	True/False	61-69		
	Short Answer	15	13,14	
	Essay	7		
	Integrative Essay			

(Continued on next page)

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Section/ Learning Objective		Factual	Conceptual	Applied
A Tour Through The Brain 2.4.A – List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. 2.4.B – Describe the structure, function, and location of the thalamus. 2.4.C – Describe the structure, function, and location of the hypothalamus and pituitary gland. 2.4.D – Describe the structure, function, and location of the amygdala. 2.4.E – Describe the structure, function, and location of the hippocampus. 2.4.F – Describe the structure of the cerebrum, and explain the function of the corpus callosum. 2.4.G – Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex.	Multiple Choice	126-132,134,137,138, 140,141,143-154, 156-162,164,166-172, 175-179	139,142,163,165,173,174	133,135,136,155, 180
	True/False	70-104		100
	Short Answer	16,17,18,19,22,23,24	20,21	
	Essay	9,10		8
	Integrative Essay			
The Two Hemispheres Of The Brain 2.5.A – Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres. 2.5.B - Describe why the two hemispheres of the brain are allies rather than opposites.	Multiple Choice	181,182,183,187,188, 189,191	184,185,186,190	
	True/False	105-112		
	Short Answer	25,26,27		
	Essay			
	Integrative Essay	2		
The Flexible Brain 2.6.A – Define neural plasticity, and summarize some of the main evidence that the brain has the ability to change in response to new experiences. 2.6.B – Discuss the relationship between cultural forces and brain function. 2.6.C - Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior.	Multiple Choice	193	192,194,195,196	
	True/False	113-119	120	
	Short Answer		28	
	Essay	11		
	Integrative Essay			

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Name _____

Chapter 2– Pop Quiz 1

1. A collection of neurons and supportive tissue running from the base of the brain down the center of the back, protected by a column of bones, is called the
   a. spinal cord.
   b. cerebellum.
   c. somatic nervous system.
   d. amygdala.

2. Shannon blinks as she steps off the school bus and walks into a gust of wind. This automatic reaction is regulated by the
   a. spinal cord.
   b. lower part of her brain.
   c. hormonal activity in her body.
   d. hippocampus.

3. The somatic nervous system is also called the
   a. sympathetic nervous system.
   b. parasympathetic nervous system.
   c. central nervous system.
   d. skeletal nervous system.

4. A cell that conducts electrochemical signals and is the basic unit of the nervous system is called a
   a. glial cell.
   b. neuron.
   c. neurotransmitter.
   d. nerve.

5. New research suggests that glial cells make up around _____ of the brain's cells.
   a. 10 percent
   b. 25 percent
   c. 50 percent
   d. 90 percent

6. Which part of the neuron transmits messages to other neurons, muscles, or gland cells?
   a. the cell body
   b. dendrites
   c. the axon
   d. glial cells

7. Which of the following neurotransmitters affects neurons involved in muscle action, arousal, vigilance, memory, and emotion?
   a. serotonin
   b. GABA
   c. acetylcholine
   d. norepinephrine

8. In _____, brain cells are stimulated using a powerful magnetic field produced by a wire coil placed on a person's head that temporarily inactivates neural circuits.
   a. positron-emission tomography
   b. functional magnetic resonance imaging
   c. transcranial direct current stimulation
   d. transcranial magnetic stimulation

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

9. The _____ is a structure in the brain stem that is involved in activities like sleeping, waking, and dreaming.
   a. medulla
   b. pons
   c. thalamus
   d. cerebellum

10. Researchers took photographs of different faces, cut them down the middle vertically, and pasted different halves together to form composite faces. The reconstructed photographs were flashed quickly to split-brain patients. It was found that the split-brain patients would
   a. name the person in the left part of the image and point with the right hand to the left image.
   b. name the person in the right part of the image and point with the left hand to the left image.
   c. name the person in the right part of the image and point with the right hand to the left image.
   d. name the person in the left part of the image and point with the left hand to the right image.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Chapter 2 – Pop Quiz 1
Answer Key

1. a — Rationale: The spinal cord is a collection of neurons and supportive tissue running from the base of the brain down the center of the back, protected by a column of bones. The spinal cord is located within the vertebral column. (Factual, Easy, LO 2.1.A, APA 1.1)

2. b — Rationale: Reflexes that occur above the neck are controlled by the lower parts of the brain. (Applied, Difficult, LO 2.1.A, APA 1.1, 2.1)

3. d — Rationale: The somatic nervous system is also called the skeletal nervous system. (Factual, Moderate, LO 2.1.B, APA 1.1)

4. b — Rationale: The neuron is the basic unit of nervous system function. It uses electrochemical signals to communicate with other cells. (Factual, Easy, LO 2.2.A, APA 1.1)

5. c — Rationale: An adult brain contains about 171 billion cells, about evenly divided between neurons and glial cells. (Factual, Moderate, LO 2.2.A, APA 1.1)

6. c — Rationale: The axon transmits information to other neurons, to skeletal muscle, and to gland cells. (Factual, Easy, LO 2.2.B, APA 1.1)

7. c — Rationale: Acetylcholine affects neurons involved in muscle action, arousal, vigilance, memory, and emotion. (Factual, Easy, LO 2.2.E, APA 1.1)

8. d — Rationale: Transcranial magnetic stimulation is a method of stimulating brain cells, using a powerful magnetic field produced by a wire coil placed on a person's head. (Factual, Easy, LO 2.2.E, APA 1.1)

9. b — Rationale: The pons is involved in sleeping, waking, and dreaming among other things. (Factual, Easy, LO 2.4.A, APA 1.1)

10. b — Rationale: In the split-brain patient, each hemisphere perceives information in the opposite half of the visual field. Thus, they can verbally describe only what they see in the right half of the visual field, though they can indicate, with their left hand, what they saw in the left half of the visual field. (Conceptual, Difficult, LO 2.5.A, APA 1.1, 1.2, 2.1)

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Name _____

Chapter 2– Pop Quiz 2

1. Which of the following is true of spinal reflexes?
   a. They are not automatic and require conscious effort.
   b. Spinal reflexes control such responses as withdrawing from a painful stimulus, sneezing, and blinking.
   c. They involve sending sensory messages to the spinal cord that immediately trigger a motor response.
   d. They require sensory information to be sent to the brain and then back down to the spinal cord.

2. _____ carry orders from the central nervous system to muscles, glands, and internal organs.
   a. Motor nerves
   b. Sensory nerves
   c. Dendrites
   d. Glial cells

3. On a hike through the hills, Tim feels a bug crawling up his leg under his pants. Which system is necessary for Tim to be aware of the bug?
   a. sympathetic nervous system
   b. endocrine system
   c. somatic nervous system
   d. autonomic nervous system

4. _____ are the brain's communication specialists, transmitting information to, from, and within the central nervous system.
   a. Neurotransmitters
   b. Neurons
   c. Glial cells
   d. Hormones

5. Which part of a neuron acts like an antenna to receive messages from other neurons and transmits these messages toward the cell body?
   a. neurotransmitters
   b. dendrites
   c. axons
   d. glial cells

6. Emily is told by her physician that her symptoms are caused by the loss of myelin. Her diagnosis is most likely to be
   a. Parkinson's disease.
   b. Alzheimer's disease.
   c. multiple sclerosis.
   d. epilepsy.

7. Which of the following neurotransmitters functions as the major inhibitory neurotransmitter in the brain?
   a. glutamate
   b. GABA
   c. acetylcholine
   d. norepinephrine

8. A PET scan
   a. records brain waves through electrodes taped to the scalp.
   b. records biochemical changes in the brain as they are happening.
   c. stimulates the brain by producing a magnetic field through a wire coil.
   d. uses radio frequencies and a magnetic field to produce images of the brain.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

9. The _____, or "lesser brain," is involved in remembering simple skills and acquired reflexes.
   a. pons
   b. medulla
   c. reticular activating system
   d. cerebellum

10. Linguistic and analytic skills are typically handled by the
   a. right half of your brain.
   b. left half of your brain.
   c. top half of your brain.
   d. back half of your brain.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Chapter 2 – Pop Quiz 2
Answer Key

1. c — Rationale: Spinal reflexes are automatic responses that occur without conscious effort. In fact, spinal reflexes do not even require the brain to occur. Reflexes above the neck, such as sneezing and blinking, are not spinal reflexes because they involve the lower part of the brain rather than the spinal cord. (Conceptual, Moderate, LO 2.1.A, APA 1.1, 1.2)

2. a — Rationale: Motor nerves carry orders from the central nervous system to muscles, glands, and internal organs. (Factual, Easy, LO 2.1.B, APA 1.1)

3. c — Rationale: Sensory information from the skin is carried to the spinal cord by sensory nerves, a part of the somatic nervous system. (Applied, Moderate, LO 2.1.B, APA 1.1, 2.1)

4. b — Rationale: Neurons are the brain's communication specialists, transmitting information to, from, and within the central nervous system. (Factual, Easy, LO 2.2.A, APA 1.1)

5. b — Rationale: Dendrites receive information from other neurons and transmit these messages toward the cell body. (Factual, Easy, LO 2.2.B, APA 1.1)

6. c — Rationale: Multiple sclerosis is a disorder involving the loss of myelin in the brain. (Applied, Moderate, LO 2.2.B, APA 1.1, 2.1)

7. b — Rationale: GABA, gamma-aminobutyric acid, is the most common inhibitory neurotransmitter in the brain. (Factual, Easy, LO 2.2.E, APA 1.1)

8. b — Rationale: In a PET scan, a radioactively labeled substance such as glucose is injected. The most active cells absorb the most glucose. Therefore, it is possible to scan the brain to see which cells are active in a particular task. (Factual, Easy, LO 2.3.B, APA 1.1)

9. d — Rationale: In addition to being involved in motor coordination, posture, and balance, the cerebellum is involved in remembering simple skills and acquired reflexes. Its name means "lesser brain." (Factual, Moderate, LO 2.4.A, APA 1.1)

10. b — Rationale: For most people, analytic skills and language are primarily left hemisphere functions, while the right hemisphere is more important for processing spatial information, including recognizing faces. (Factual, Easy, LO 2.5.B, APA 1.1)

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Multiple Choice Questions

1. The function of the _____ is to gather and process information, produce responses to stimuli, and coordinate the workings of different cells.
   a. cardiovascular system
   b. respiratory system
   c. nervous system
   d. lymphatic system
   Section: The Nervous System: A Basic Blueprint
   Type: Factual **Answer: c**
   Level of Difficulty: Easy
   LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. APA 1.1
   Rationale: Nervous systems are specialized to receive information from the environment and from the body, analyze that information, and then command the body to make appropriate responses.

2. The nervous system is divided into two main parts
   a. the central nervous system and the peripheral nervous system.
   b. the brain and the spinal cord.
   c. the autonomic nervous system and the somatic nervous system.
   d. the brain and the nerves.
   Section: The Nervous System: A Basic Blueprint
   Type: Factual **Answer: a**
   Level of Difficulty: Moderate
   LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. APA 1.1
   Rationale: The two divisions of the nervous system are the central nervous system and the peripheral nervous system.

3. The _____ receives, processes, interprets, and stores incoming information from the senses and also sends out messages destined for muscles, glands, and internal organs.
   a. cardiovascular system
   b. central nervous system
   c. endocrine system
   d. lymphatic system
   Section: The Nervous System: A Basic Blueprint
   Type: Factual **Answer: b**
   Level of Difficulty: Easy
   LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. APA 1.1
   Rationale: The function of the central nervous system as a whole is to receive and analyze information, store information for later use, determine appropriate responses, and send out commands to enact those responses.

4. The central nervous system consists of the
   a. parasympathetic and sympathetic divisions.
   b. brain and the spinal cord.
   c. muscles and glands.
   d. sense organs and sensory neurons.
   Section: The Nervous System: A Basic Blueprint
   Type: Factual **Answer: b**
   Level of Difficulty: Easy
   LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. APA 1.1

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Rationale: The central nervous system is the portion of the nervous system consisting of the brain and spinal cord.
% correct 94 a = 4 b = 94 c = 1 d = 1 r = .25

5. An important role of the spinal cord is the
   a. processing and storing of incoming sensory information.
   b. control of reflexes above the neck.
   c. monitoring of the activity of the internal organs.
   d. control of automatic reflexes below the neck.
   Section: The Nervous System: A Basic Blueprint
   Type: Factual Answer: d
   Level of Difficulty: Easy
   LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. APA 1.1, 1.2
   Rationale: One function of the spinal cord is the control of basic reflexes. The other functions listed are the responsibility of the brain.

6. A collection of neurons and supportive tissue running from the base of the brain down the center of the back, protected by a column of bones is called the
   a. spinal cord.
   b. cerebellum.
   c. somatic nervous system.
   d. amygdala.
   Section: The Nervous System: A Basic Blueprint
   Type: Factual Answer: a
   Level of Difficulty: Easy
   LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. APA 1.1
   Rationale: The spinal cord is a collection of neurons and supportive tissue running from the base of the brain down the center of the back, protected by a column of bones. The spinal cord is located within the vertebral column.

7. Which of the following is true of spinal reflexes?
   a. They are not automatic and require conscious effort.
   b. Spinal reflexes control such responses as withdrawing from a painful stimulus, sneezing, and blinking.
   c. They involve sending sensory messages to the spinal cord that immediately trigger a motor response.
   d. They require sensory information to be sent to the brain and then back down to the spinal cord.
   Section: The Nervous System: A Basic Blueprint
   Type: Conceptual Answer: c
   Level of Difficulty: Moderate
   LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. APA 1.1, 2.1
   Rationale: Spinal reflexes are automatic responses that occur without conscious effort. In fact, spinal reflexes do not even require the brain to occur. Reflexes above the neck, such as sneezing and blinking, are not spinal reflexes because they involve the lower part of the brain rather than the spinal cord.

8. Charlie touches a hot stove and immediately pulls his hand away. His quick response occurs because
   a. spinal reflexes are automatic, requiring no conscious effort.
   b. the brain registers the pain and responds quickly.
   c. his glands have secreted chemical messengers called hormones.
   d. pain information is sent to the brain faster than other sensory information.
   Section: The Nervous System: A Basic Blueprint
   Type: Applied Answer: a
   Level of Difficulty: Moderate

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. APA 1.1, 2.1
Rationale: The withdrawal reflex described here is an example of a spinal reflex. Spinal reflexes do not require the help of the brain, so they can occur very quickly.

9. Reflexes above the neck, such as sneezing and blinking, are controlled by the _____.
   a. spinal cord
   b. sympathetic nervous system
   c. brain
   d. parasympathetic nervous system
   Section: The Nervous System: A Basic Blueprint
   Type: Factual **Answer: c**
   Level of Difficulty: Easy
   LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. APA 1.1
   Rationale: Reflexes above the neck are controlled by the lower part of the brain, whereas the spinal cord controls reflexes in the rest of the body.

10. Reflexes below the neck, such as pulling a hand away from a hot stove, are controlled by the _____.
   a. spinal cord
   b. sympathetic nervous system
   c. brain
   d. parasympathetic nervous system
   Section: The Nervous System: A Basic Blueprint
   Type: Factual **Answer: a**
   Level of Difficulty: Easy
   LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. APA 1.1
   Rationale: Reflexes above the neck are controlled by the brain stem, while the spinal cord controls reflexes in the rest of the body.

11. Shayla blinks as she steps off the school bus and walks into a gust of wind. This automatic reaction is regulated by the
   a. spinal cord.
   b. lower part of her brain.
   c. hormonal activity in her body.
   d. hippocampus.
   Section: The Nervous System: A Basic Blueprint
   Type: Applied **Answer: b**
   Level of Difficulty: Difficult
   LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. APA 1.1, 2.1
   Rationale: Reflexes that occur above the neck are controlled by the lower parts of the brain.

12. The input and output of the central nervous system is handled by the
   a. lymphatic system.
   b. endocrine system.
   c. cardiovascular system.
   d. peripheral nervous system.
   Section: The Nervous System: A Basic Blueprint
   Type: Factual **Answer: d**
   Level of Difficulty: Easy
   LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.2, 2.1

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Rationale: The peripheral nervous system refers to the parts of the nervous system that are outside of the brain and spinal cord. It includes sensory and motor nerves, which send information to the central nervous system and carry it away, respectively.

13. _____ carry orders from the central nervous system to muscles, glands, and internal organs.
    a. Motor nerves
    b. Sensory nerves
    c. Dendrites
    d. Glial cells
    Section: The Nervous System: A Basic Blueprint
    Type: Factual **Answer: a**
    Level of Difficulty: Easy
    LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1
    Rationale: Motor nerves carry orders from the central nervous system to muscles, glands, and internal organs.

14. In the peripheral nervous system, _____ enable us to move, and cause glands to contract and to secrete hormones.
    a. motor nerves
    b. glial cells
    c. dendrites
    d. sensory nerves
    Section: The Nervous System: A Basic Blueprint
    Type: Factual **Answer: a**
    Level of Difficulty: Easy
    LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1
    Rationale: Motor nerves carry commands from the central nervous system to skeletal muscles and glands.

15. In the peripheral nervous system, _____ carry messages from special receptors in the skin, muscles, and other internal and external sense organs to the spinal cord, which sends them along to the brain.
    a. hormones
    b. motor nerves
    c. neuromodulators
    d. sensory nerves
    Section: The Nervous System: A Basic Blueprint
    Type: Factual **Answer: d**
    Level of Difficulty: Easy
    LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1
    Rationale: Sensory nerves carry information from sense organs to the spinal cord and brain.

16. A young teen returns from a day at the beach to find she has developed a severe sunburn. Which neurons are sending the messages from her burned skin to her central nervous system, informing her of the pain from the burn?
    a. sensory neurons
    b. motor neurons
    c. synaptic neurons
    d. association neurons
    Section: The Nervous System: A Basic Blueprint
    Type: Applied **Answer: a**
    Level of Difficulty: Easy

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1, 2.1
Rationale: Sensory nerves carry information from sense organs to the spinal cord and brain.

17. Which of the following is a part of the peripheral nervous system?
a. the brain
b. the spinal cord
c. the somatic nervous system
d. the endocrine system
Section: The Nervous System: A Basic Blueprint
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1, 2.1
Rationale: The somatic nervous system is a subdivision of the peripheral nervous system.

18. The subdivision of the peripheral nervous system that connects to sensory receptors and to skeletal muscles is called the
a. sympathetic nervous system.
b. parasympathetic nervous system.
c. somatic nervous system.
d. central nervous system.
Section: The Nervous System: A Basic Blueprint
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1
Rationale: The somatic nervous system carries sensory information to the brain and motor commands to skeletal muscle.

19. The somatic nervous system is also called the
a. sympathetic nervous system.
b. parasympathetic nervous system.
c. central nervous system.
d. skeletal nervous system.
Section: The Nervous System: A Basic Blueprint
Type: Factual **Answer: d**
Level of Difficulty: Moderate
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1
Rationale: The somatic nervous system is also called the skeletal nervous system.

20. The functioning of blood vessels, glands, and internal organs is regulated by the
a. autonomic nervous system.
b. somatic nervous system.
c. hippocampus.
d. lymphatic system
Section: The Nervous System: A Basic Blueprint
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1
Rationale: The autonomic nervous system regulates the function of internal organs, glands, and blood vessels.

21. Which of the following statements is true?

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

a. The autonomic nervous system collects sensory input and sends commands to skeletal muscles.
b. The autonomic nervous system consists of the sympathetic and parasympathetic nervous systems.
c. The sympathetic nervous system enables the body to conserve and store energy.
d. The parasympathetic nervous system mobilizes the body for action.

Section: The Nervous System: A Basic Blueprint
Type: Conceptual **Answer: b**
Level of Difficulty: Easy
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1, 2.1
Rationale: The autonomic nervous system consists of the sympathetic nervous system, which mobilizes the body for action, and the parasympathetic nervous system, which enables the body to conserve and store energy.

22. On a hike through the hills, Tony feels a bug crawling up his leg under his pants. Which system is necessary for Tony to be aware of the bug?
a. sympathetic nervous system
b. endocrine system
c. somatic nervous system
d. autonomic nervous system

Section: The Nervous System: A Basic Blueprint
Type: Applied **Answer: c**
Level of Difficulty: Moderate
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1, 2.1
Rationale: Sensory information from the skin is carried to the spinal cord by sensory nerves, a part of the somatic nervous system.

23. As she walks out of the living room, Gale turns off the light. In this example, which system is necessary for Gale to perform this action?
a. sympathetic nervous system
b. parasympathetic nervous system
c. endocrine system
d. somatic nervous system

Section: The Nervous System: A Basic Blueprint
Type: Applied **Answer: d**
Level of Difficulty: Moderate
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1, 2.1
Rationale: The motor nerves, controlling skeletal muscles, are part of the somatic nervous system.

24. Autumn spots the boy that she has a crush on sitting with his friends. Her heart begins to pound, her hands get sweaty, and her cheeks feel hot. Autumn's _____ has been activated.
a. autonomic nervous system
b. somatic nervous system
c. spinal reflex system
d. skeletal nervous system

Section: The Nervous System: A Basic Blueprint
Type: Applied **Answer: a**
Level of Difficulty: Moderate
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1, 2.1
Rationale: The sympathetic nervous system, a part of the autonomic nervous system, controls arousal.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

25. While Breanna is walking on the road, a bicyclist swerves toward her. Her heart races and sweat breaks out as she jumps out of harm's way. Soon, Breanna's heart rate begins to decrease. This calming reaction is due to the action of Breanna's
a. skeletal nervous system.
b. endocrine system.
c. parasympathetic nervous system.
d. sympathetic nervous system.
Section: The Nervous System: A Basic Blueprint
Type: Applied **Answer: c**
Level of Difficulty: Moderate
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1, 2.1
Rationale: The parasympathetic nervous system slows down heart rate and other functions following sympathetic arousal.

26. As Monique is walking across the street, a car swerves toward her. Her heart races and sweat breaks out as she jumps out of harm's way. This mobilization of energy is due to the action of Monique's
a. lymphatic system.
b. endocrine system.
c. parasympathetic nervous system.
d. sympathetic nervous system.
Section: The Nervous System: A Basic Blueprint
Type: Applied **Answer: d**
Level of Difficulty: Moderate
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1, 2.1
Rationale: The sympathetic nervous system mobilizes our body for action.

27. A neuron is also called a
a. glial cell.
b. precursor cell.
c. nerve cell.
d. neurotransmitter.
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.2.A Compare the functions of neurons and glial cells. APA 1.1
Rationale: Neurons are also known as nerve cells.

28. _____ are the brain's communication specialists, transmitting information to, from, and within the central nervous system.
a. Neurotransmitters
b. Neurons
c. Glial cells
d. Hormones
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.2.A Compare the functions of neurons and glial cells. APA 1.1
Rationale: Neurons are the brain's communication specialists and are considered the building blocks of the nervous system.

29. The name "glial" is derived from the Greek word for "glue." It is an appropriate name because glial cells
a. keep the axon from detaching from the cell body.
b. hold neurons in place.
c. fuse neurotransmitters to receptor sites.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

d. fuse sodium ions to potassium ions.
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.2.A Compare the functions of neurons and glial cells. APA 1.2
Rationale: One of the functions of glial cells is to hold neurons in place.

30. A cell that conducts electrochemical signals and is the basic unit of the nervous system is called a
a. glial cell.
b. neuron.
c. neurotransmitter.
d. nerve.
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.2.A Compare the functions of neurons and glial cells. APA 1.1
Rationale: The neuron is the basic unit of nervous system function. It uses electrochemical signals to communicate with other cells.

31. New research suggests that glial cells make up around _____ of the brain's cells.
a. 10 percent
b. 25 percent
c. 50 percent
d. 90 percent
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Moderate
LO 2.2.A Compare the functions of neurons and glial cells. APA 1.1
Rationale: An adult brain contains about 171 billion cells, about evenly divided between neurons and glia.

32. An adult brain contains about 171 _____ cells.
a. thousand
b. million
c. billion
d. trillion
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Moderate
LO 2.2.A Compare the functions of neurons and glial cells. APA 1.1
Rationale: An adult brain contains about 171 billion cells, about evenly divided between neurons and glia.

33. The part of neurons that receive messages from nerve cells and look like the branches of a tree are called
a. axons.
b. neurotransmitters.
c. dendrites.
d. cell bodies.
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1
Rationale: The dendrites have many branches like a tree and receive messages from other neurons like antennas.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

34. Which part of a neuron acts like an antenna to receive messages from other neurons and transmit these messages toward the cell body?
a. neurotransmitters
b. dendrites
c. axons
d. glial cells
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1
Rationale: Dendrites receive information from other neurons and transmit these messages toward the cell body.

35. Which of the following includes the nucleus of the neuron, which contains genetic information, and is shaped roughly like a sphere or a pyramid?
a. the axon
b. the cell body
c. dendrites
d. glial cells
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1
Rationale: The cell body is shaped roughly like a sphere or a pyramid; it includes the cell's nucleus, which contains genetic information and controls the cell's growth and reproduction.

36. Which part of the neuron contains the biochemical machinery for keeping the neuron alive?
a. the cell body
b. glial cells
c. the axon
d. dendrites
Section: Communication in the Nervous System
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1, 2.1
Rationale: The cell body contains the biochemical machinery for keeping the neuron alive.

37. Which of the following transmit messages away from cell bodies to neurons, muscles, or gland cells?
a. axons
b. neurotransmitters
c. dendrites
d. glial cells
Section: Communication in the Nervous System
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1
Rationale: The axon transmits information to other neurons, to skeletal muscle, and to gland cells.

38. Outgoing neural signals pass along the _____ of a neuron to terminal branches.
a. receptor site
b. axon
c. glial cell
d. dendrites
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Easy

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1
Rationale: The axon transmits information to other neurons, to skeletal muscle, and to gland cells.

39. Which part of the neuron transmits messages to other neurons, muscles, or gland cells?
a. the cell body
b. dendrites
c. the axon
d. glial cells
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1
Rationale: The axon transmits information to other neurons, to skeletal muscle, and to gland cells.

40. Many axons, especially the larger ones, are insulated by a surrounding layer of fatty material called the _____.
a. neuromodulator
b. myelin sheath
c. dendrite
d. glia
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1
Rationale: Large axons are insulated by a surrounding layer of fatty material called the myelin sheath.

41. Constrictions that divide the myelin sheath into segments are called _____.
a. dendrites
b. glia
c. nodes
d. sclerosis
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1
Rationale: Constrictions in the myelin sheath called nodes divide it into segments, making it look a little like a string of link sausages.

42. The myelin sheath in the central nervous system is made up of
a. neurotransmitters.
b. GABA.
c. dendrites.
d. glial cells.
Section: Communication in the Nervous System
Type: Factual **Answer: d**
Level of Difficulty: Easy
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1
Rationale: Many axons, especially the larger ones, are insulated by a surrounding layer of fatty material called the myelin sheath, which in the central nervous system is made up of glial cells.

43. Emory is told by her physician that her symptoms are caused by the loss of myelin. Her diagnosis is most likely to be
a. Parkinson's disease.
b. Alzheimer's disease.
c. multiple sclerosis.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

d. epilepsy.
Section: Communication in the Nervous System
Type: Applied **Answer: c**
Level of Difficulty: Moderate
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1, 2.1
Rationale: Multiple sclerosis is a disorder involving the loss of myelin in the brain.

44. Judy is told by her physician that her symptoms are caused by a loss of myelin. Her symptoms would be most likely to include
a. burning fever.
b. problems with vision.
c. hallucinations.
d. psychosis.
Section: Communication in the Nervous System
Type: Applied **Answer: b**
Level of Difficulty: Difficult
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1, 2.1
Rationale: In individuals with multiple sclerosis, loss of myelin causes erratic nerve signals, leading to loss of sensation, weakness or paralysis, lack of coordination, or vision problems.

45. One purpose of the _____ is to prevent signals in adjacent cells from interfering with each other.
a. cell body
b. myelin sheath
c. dendrites
d. axon
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1
Rationale: One purpose of the myelin sheath is to prevent signals in adjacent cells from interfering with each other. Another purpose is to speed up the conduction of neural impulses.

46. One purpose of the _____ is to speed up the conduction of neural impulses.
a. dendrites
b. axon terminal
c. myelin sheath
d. synaptic vesicle
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1
Rationale: The myelin sheath insulates axons and increases the speed of neural conduction.

47. A nerve is a bundle of
a. neurotransmitters in the central nervous system.
b. glial cells in the brain.
c. axons in the peripheral nervous system.
d. cell bodies in the brain.
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1
Rationale: A nerve is a bundle of axons, and sometimes dendrites, in the peripheral nervous system.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

48. The human body has _____ pairs of peripheral nerves, one nerve from each pair on the left side of the body and the other on the right.
a. 43
b. 12
c. 31
d. 52
Section: Communication in the Nervous System
Type: Factual **Answer: a**
Level of Difficulty: Difficult
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1, 2.2
Rationale: The human body has 12 pairs of cranial nerves and 31 pairs of spinal nerves, for a total of 43 peripheral nerve pairs.

49. The human body has _____ pairs of cranial nerves in the head, connecting directly to the brain.
a. 43
b. 12
c. 31
d. 52
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Moderate
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1
Rationale: The human body has 12 pairs of cranial nerves and 31 pairs of spinal nerves, for a total of 43 peripheral nerves.

50. Research by contemporary neuroscientists has shown that
a. no new central nervous system cells are produced after infancy.
b. extended immobility can regrow severed spinal-cord axons in animals.
c. it is impossible to regrow spinal-cord axons after damage.
d. severed spinal-cord axons in an animal regrow if treated with certain nervous system chemicals.
Section: Communication in the Nervous System
Type: Conceptual **Answer: d**
Level of Difficulty: Moderate
LO 2.2.C Explain how stem cells contribute to the process of neurogenesis. APA 1.1, 2.2
Rationale: In research labs, it has been shown that severed spinal cord axons may regrow in animals when treated with certain nervous system chemicals. Neurons can be regenerated from immature stem cells.

51. The process of neurogenesis occurs when
a. neurons convert themselves to stem cells.
b. neurons divide to create two new neurons.
c. immature stem cells give birth to new neurons.
d. neurons convert themselves to glial cells.
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.2.C Explain how stem cells contribute to the process of neurogenesis. APA 1.1, 2.1
Rationale: Neurogenesis refers to the production of new neurons from immature stem cells.

52. Stem cells in brain regions involved in learning and memory seem to divide and mature
a. only during the first few months of pregnancy.
b. until the age of 1 year.
c. until puberty is reached.
d. throughout adulthood.
Section: Communication in the Nervous System
Type: Factual **Answer: d**

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Level of Difficulty: Easy
LO 2.2.C Explain how stem cells contribute to the process of neurogenesis. APA 1.1
Rationale: Research suggests that stem cells may divide and mature throughout adulthood.

53. Neuroscientists have found that _____ can inhibit the process of neurogenesis.
a. enriched environments
b. stress
c. physical exercise
d. effortful mental activity
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.2.C Explain how stem cells contribute to the process of neurogenesis. APA 1.1
Rationale: Stress can block or inhibit neurogenesis.

54. Neuroscientists have found that _____ can kill the new neurons that have been produced through neurogenesis.
a. physical exercise
b. effortful mental activity
c. melanin
d. nicotine
Section: Communication in the Nervous System
Type: Factual **Answer: d**
Level of Difficulty: Easy
LO 2.2.C Explain how stem cells contribute to the process of neurogenesis. APA 1.1
Rationale: Drugs like nicotine can kill newly produced neurons.

55. Which of the following statements is true regarding neurogenesis?
a. Injured or damaged neurons in the central nervous system can never regenerate.
b. No new neurons are produced in the central nervous system after infancy.
c. Neurogenesis occurs in the spinal cord but not in the brain.
d. Recent research suggests that stem cells in the brain may be able to generate new neurons throughout life.
Section: Communication in the Nervous System
Type: Conceptual **Answer: d**
Level of Difficulty: Easy
LO 2.2.C Explain how stem cells contribute to the process of neurogenesis. APA 1.1, 2.1
Rationale: Research suggests that stem cells in the brain may divide and mature into neurons throughout adulthood.

56. Stem-cell research is one of the hottest areas in biology and neuroscience because stem cells
a. have the capacity to develop into many types of mature cells.
b. are not affected by the process of neurogenesis.
c. are readily available in nature for research.
d. are immune to most common ailments.
Section: Communication in the Nervous System
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.2.C Explain how stem cells contribute to the process of neurogenesis. APA 1.1, 2.1, 2.2
Rationale: Stem-cell research is one of the hottest areas in biology and neuroscience because embryonic stem cells can generate many types of specialist cells, from neurons to kidney cells. Therefore, stem cells may be useful for treating damaged tissues.

57. The minuscule space where the axon terminal of one neuron nearly touches a dendrite or the cell body of another is called the _____.
a. receptor site

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

b. dendrite
c. synaptic cleft
d. synaptic vesicle
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1
Rationale: Neurons do not directly touch each other, end to end. Instead, they are separated by a minuscule space called the synaptic cleft.

58. The site where the transmission of a nerve impulse from one nerve cell to another occurs is called a _____.
a. synapse
b. stem cell
c. cell body
d. neurotransmitter
Section: Communication in the Nervous System
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1
Rationale: The site where the transmission of a nerve impulse from one nerve cell to another occurs is called a synapse.

59. A neuron at rest contains
a. only positively charged ions.
b. only negatively charged ions.
c. a mix of positive and negatively charged ions.
d. no charged particles.
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1
Rationale: A neuron at rest contains a mix of positive and negatively charged ions.

60. When a neuron is stimulated, sodium moves into the cell, causing the inside of the neuron to
a. become less negative relative to the outside.
b. become more negative relative to the outside.
c. remain neutral in charge.
d. become less positive relative to the outside.
Section: Communication in the Nervous System
Type: Factual **Answer: a**
Level of Difficulty: Difficult
LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1, 2.1, 2.2
Rationale: At rest, the neuron has a negative charge relative to the outside. But when it is stimulated, special "gates" in the cell's membrane open, allowing positively charged sodium ions to move from the outside to the inside, making the neuron less negative.

61. A brief change in the electrical voltage that occurs in response to stimulation that travels down an axon is called
a. an inhibitory response.
b. an action potential.
c. neurogenesis.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

d. transcranial direct current stimulation.
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1
Rationale: An action potential is a brief pulse of electricity that occurs in the axon.

62. The neural impulse that travels down an axon is _____ in nature.
a. electrical
b. chemical
c. mechanical
d. acoustic
Section: Communication in the Nervous System
Type: Conceptual **Answer: a**
Level of Difficulty: Moderate
LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1
Rationale: An action potential is a brief pulse of electricity that occurs in the axon.

63. Action potentials travel swiftly down
a. axons with myelin and more slowly in axons without myelin.
b. axons without myelin and more slowly in axons with myelin.
c. dendrites with myelin and more slowly in dendrites without myelin.
d. dendrites without myelin and more slowly in dendrites with myelin.
Section: Communication in the Nervous System
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1
Rationale: Myelin increases the speed of conduction of the action potential in the axon.

64. Nerve impulses travel more slowly in babies than in older children and adults because
a. an infant does not have as many synaptic connections as an adult has.
b. dendrites and axons take time to develop in infants.
c. neurons are much shorter in infants than in adults.
d. the myelin sheaths on axons are not yet fully developed in infants.
Section: Communication in the Nervous System
Type: Factual **Answer: d**
Level of Difficulty: Moderate
LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1, 2.1
Rationale: Myelin increases the speed of conduction of the action potential in the axon and infants do not yet have much myelin.

65. When an action potential reaches the end of the axon terminal
a. the action potential "hops" directly across the synaptic cleft.
b. it electrically activates the receptor sites.
c. it causes synaptic vesicles to release neurotransmitters.
d. it reverses direction.
Section: Communication in the Nervous System
Type: Conceptual **Answer: c**
Level of Difficulty: Moderate
LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Rationale: When an action potential reaches the end of the axon terminal, it causes the release of neurotransmitter.

66. Receptor sites on the membrane of a neuron's dendrites receive
a. neurotransmitters.
b. synaptic vesicles.
c. action potentials.
d. negative potassium ions.
Section: Communication in the Nervous System
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1
Rationale: Neurotransmitter molecules bind briefly with receptor sites, special molecules in the membrane of the receiving neuron's dendrites.

67. When a neurotransmitter binds to a receptor site, it can cause
a. the receptor to fire an action potential.
b. an excitatory response, but it cannot cause an inhibitory response.
c. an inhibitory response, but it cannot cause an excitatory response.
d. either an excitatory response or an inhibitory response.
Section: Communication in the Nervous System
Type: Conceptual **Answer: d**
Level of Difficulty: Moderate
LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1, 2.1
Rationale: When neurotransmitters bind to receptor sites, some neurotransmitters will cause a decrease in the negative charge, causing an excitatory effect. Other neurotransmitters will cause an increase in the negative charge, leading to an inhibitory response.

68. In the process of getting a message across the synaptic cleft to another cell, _____ open and release molecules of a chemical substance to diffuse across the synaptic cleft.
a. synaptic vesicles
b. receptor sites
c. axon terminals
d. dendrites
Section: Communication in the Nervous System
Type: Conceptual **Answer: a**
Level of Difficulty: Moderate
LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1, 2.1
Rationale: When a neural impulse reaches the axon terminal's button-like tip, it must get its message across the synaptic cleft to another cell. At this point, synaptic vesicles, tiny sacs in the tip of the axon terminal, open and release a few thousand molecules of a chemical substance called a neurotransmitter. These molecules then diffuse across the synaptic cleft.

69. _____ are special molecules in the membrane of a receiving neuron's dendrites with which neurotransmitter molecules bind.
a. Synapses
b. Glia
c. Neuromodulators
d. Receptor sites
Section: Communication in the Nervous System
Type: Factual **Answer: d**
Level of Difficulty: Easy

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1
Rationale: Receptor sites are special places on the membrane of dendrites where neurotransmitters can attach.

70. When a neurotransmitter molecule binds briefly with a receptor site, changes occur in the receiving neuron's charge. If the neurotransmitter causes a decrease in the negative charge, then the effect is
a. a decreased probability that the receiving neuron will fire.
b. an excitatory effect.
c. an inhibitory effect.
d. a decreased probability that the neurons are densely connected.
Section: Communication in the Nervous System
Type: Conceptual **Answer: b**
Level of Difficulty: Moderate
LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1, 2.1
Rationale: Some neurotransmitters cause a decrease in the negative charge. When the charge reaches a critical level, the neuron fires—which called an excitatory effect.

71. When a neurotransmitter molecule binds briefly with a receptor site, changes occur in the receiving neuron's charge. If the neurotransmitter causes an increase in the negative charge, then the effect is
a. inhibitory, and so the probability that the receiving neuron will fire decreases.
b. excitatory, and so the probability that the receiving neuron will fire increases.
c. inhibitory, and so the probability that the receiving neuron will fire increases.
d. excitatory, and so the probability that the receiving neuron will fire decreases.
Section: Communication in the Nervous System
Type: Conceptual **Answer: a**
Level of Difficulty: Moderate
LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1, 2.1, 2.2
Rationale: Neurotransmitters that cause an increase in the negative charge will make the neuron less likely to fire. This is called an inhibitory effect.

72. Neurotransmitters make it possible for
a. adult neurogenesis to occur.
b. unmyelinated cells to grow myelin.
c. one neuron to excite another.
d. glands to influence the function of various organs throughout the body.
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1
Rationale: Neurotransmitters are chemicals released from the axon terminal that can have either excitatory or inhibitory effects on the activity of the receiving cell.

73. Which of the following is a chemical messenger?
a. synaptic vesicles
b. receptor sites
c. neurotransmitters
d. potassium ions
Section: Communication in the Nervous System
Type: Conceptual **Answer: c**
Level of Difficulty: Easy
LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

APA 1.1
Rationale: Neurotransmitters and hormones are chemicals that carry messages to other cells.

74. Which of the following neurotransmitters affects neurons involved in sleep, appetite, sensory perception, temperature regulation, pain suppression, and mood?
a. serotonin
b. dopamine
c. acetylcholine
d. norepinephrine
Section: Communication in the Nervous System
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: Serotonin is involved in many systems in the brain and has effects on sleep, appetite, perception, temperature regulation, pain, and mood.

75. Which of the following neurotransmitters affects neurons involved in voluntary movement, learning, memory, pleasure and reward, and possibly responses to novelty?
a. serotonin
b. dopamine
c. GABA
d. norepinephrine
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: Dopamine in the brain is involved in the control of voluntary movement, learning, memory, pleasure and reward, and response to novelty.

76. Which of the following neurotransmitters affects neurons involved in muscle action, arousal, vigilance, memory, and emotion?
a. serotonin
b. GABA
c. acetylcholine
d. norepinephrine
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: Acetylcholine affects neurons involved in muscle action, arousal, vigilance, memory, and emotion.

77. Which of the following neurotransmitters affects neurons involved in increased heart rate and the slowing of intestinal activity during stress?
a. serotonin
b. dopamine
c. acetylcholine
d. norepinephrine
Section: Communication in the Nervous System
Type: Factual **Answer: d**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Rationale: Norepinephrine affects neurons involved in increased heart rate and the slowing of intestinal activity during stress, and neurons involved in learning, memory, dreaming, waking from sleep, and emotion.

78. Which of the following neurotransmitters affects neurons involved in learning, dreaming, and waking from sleep?
a. serotonin
b. dopamine
c. norepinephrine
d. acetylcholine
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: In the brain, norepinephrine is involved in learning, dreaming, and waking from sleep.

79. Which of the following neurotransmitters functions as the major inhibitory neurotransmitter in the brain?
a. glutamate
b. GABA
c. acetylcholine
d. norepinephrine
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: GABA, gamma-aminobutyric acid, is the most common inhibitory neurotransmitter in the brain.

80. Glutamate functions as the
a. neurotransmitter most involved in voluntary movements.
b. major inhibitory neurotransmitter in the brain.
c. neurotransmitter most responsible for the slowing of intestinal activity during stress.
d. major excitatory neurotransmitter in the brain.
Section: Communication in the Nervous System
Type: Factual **Answer: d**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: Glutamate is the major excitatory neurotransmitter in the brain; it is released by about 90 percent of the brain's neurons.

81. GABA functions as the
a. neurotransmitter involved in voluntary movements.
b. major inhibitory neurotransmitter in the brain.
c. neurotransmitter responsible for the slowing of intestinal activity during stress.
d. major excitatory neurotransmitter in the brain.
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: GABA is the most common inhibitory neurotransmitter in the brain.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

82. In Parkinson's disease, a loss of cells that produce _____ is responsible for tremors and muscle rigidity.
a. acetylcholine
b. dopamine
c. GABA
d. glutamate
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Moderate
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: A loss of cells that produce dopamine is responsible for the tremors and rigidity of Parkinson's disease.

83. The levels of the neurotransmitter _____ will decrease in the human body after having a protein-rich meal.
a. acetylcholine
b. dopamine
c. serotonin
d. GABA
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Difficult
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: Serotonin levels will decrease after a protein-rich meal and increase after a high-carbohydrate, no-protein meal.

84. Actor Michael J. Fox announced that he was leaving his hit show *Spin City* because he had Parkinson's disease and wanted to spend more time with his family. The reason for his disorder is a(n)
a. loss of dopamine.
b. loss of acetylcholine.
c. overproduction of dopamine.
d. overproduction of acetylcholine.
Section: Communication in the Nervous System
Type: Applied **Answer: a**
Level of Difficulty: Difficult
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1, 2.2
Rationale: In Parkinson's disease, cells in the brain that produce dopamine degenerate, causing problems with motor control.

85. Which of the following chemicals in the nervous system is considered a neurotransmitter?
a. glutamate
b. melatonin
c. testosterone
d. progesterone
Section: Communication in the Nervous System
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: Glutamate is a neurotransmitter; the other chemicals are hormones.

86. Most recreational drugs produce their effects by
a. blocking or enhancing the actions of neurotransmitters.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

b. killing GABA neurons.
c. causing glial cells to produce excess myelin.
d. blocking glial cells from producing myelin.
Section: Communication in the Nervous System
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: Most recreational drugs produce their effects by blocking or enhancing the actions of neurotransmitters.

87. Hormones are produced primarily by
a. epithelial cells.
b. stem cells.
c. glands.
d. neurons.
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: Hormones are produced by the endocrine glands and are released directly into the bloodstream, which carries them to organs and glands where they have an effect.

88. Chemical substances secreted by glands, that affect the functioning of bodily organs, are called
a. endorphins.
b. neurotransmitters.
c. hormones.
d. opioid peptides.
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: Hormones are produced by the endocrine glands and are released directly into the bloodstream, which carries them to organs and glands where they have an effect.

89. Which of the following is a hormone?
a. glutamate
b. epinephrine
c. dopamine
d. serotonin
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1, 2.1
Rationale: Epinephrine is a hormone released from the adrenal glands.

90. Adrenal hormones play an important role in
a. facilitating the ejection of milk during nursing.
b. promoting attachment and trust.
c. the regulation of daily biological rhythms.
d. the regulation of blood sugar.
Section: Communication in the Nervous System
Type: Factual **Answer: d**

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Level of Difficulty: Moderate
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: Adrenal hormones are involved in the stress response, including the response to injury and pain. In addition, they help to regulate blood sugar levels.

91. Melatonin is secreted by the
a. gonads.
b. adrenal gland.
c. pineal gland.
d. pituitary gland.
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Moderate
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: Melatonin is a hormone released by the pineal gland. It plays a role in regulating daily biological rhythms. It also promotes sleep.

92. Oxytocin is secreted by the
a. endocrine gland.
b. adrenal gland.
c. pineal gland.
d. pituitary gland.
Section: Communication in the Nervous System
Type: Factual **Answer: d**
Level of Difficulty: Moderate
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: Oxytocin, which is secreted by a small gland in the brain, the pituitary gland, enhances uterine contractions during childbirth and facilitates the ejection of milk during nursing.

93. Adrenal hormones are produced by the glands
a. in the testes.
b. deep within the brain.
c. right above the kidneys.
d. in the ovaries.
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: The adrenal glands, located immediately above the kidneys, release hormones in response to stress and activation of the sympathetic nervous system.

94. Adrenal hormones are involved in
a. sleep.
b. emotion and stress.
c. daily biological rhythms.
d. uterine contractions during childbirth.
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Rationale: The adrenal glands, located immediately above the kidneys, release hormones in response to stress and activation of the sympathetic nervous system.

95. The outer part of each adrenal gland produces _____, which increases blood sugar levels and boosts energy.
a. estrogen
b. oxytocin
c. cortisol
d. melatonin
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Moderate
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: One of the hormones of the adrenal cortex is cortisol, which increases blood sugar levels and energy.

96. Which of the following is a possible effect of sex hormones?
a. triggering physical changes at puberty
b. regulating daily biological rhythms and sleep
c. triggering responses to drugs, such as caffeine and nicotine
d. causing increased emotion in women prior to menstruation
Section: Communication in the Nervous System
Type: Factual **Answer: a**
Level of Difficulty: Moderate
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1, 2.1
Rationale: Sex hormones set in motion the physical changes at puberty. The common belief that fluctuating levels of estrogen and progesterone make most women "emotional" before menstruation has not been borne out by research.

97. Sex hormones are secreted by tissue in the _____ and also by the adrenal glands.
a. kidneys
b. gonads
c. pineal gland
d. pituitary gland
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: Sex hormones are secreted primarily by the gonads, the testes and ovaries, but are also secreted in smaller amounts by the adrenal glands.

98. Which of the following sex hormones contributes to the growth and maintenance of the uterine lining in preparation for a fertilized egg?
a. estrogen
b. progesterone
c. testosterone
d. androgen
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Moderate
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Rationale: One role of progesterone is to promote the growth and maintenance of the uterine lining in preparation for a fertilized egg.

99. Which of the following sex hormones brings on physical changes in females at puberty, such as breast development and the onset of menstruation?
a. estrogens
b. progesterone
c. testosterone
d. androgen
Section: Communication in the Nervous System
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: Estrogens are feminizing hormones that bring on physical changes in females at puberty, such as breast development and the onset of menstruation.

100. Which of the following is a type of androgen?
a. estrogen
b. progesterone
c. testosterone
d. oxytocin
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: Testosterone is the most important of the androgens, the male sexual hormones.

101. Research on sex hormones suggests that
a. fluctuating levels of progesterone make women emotional before menstruation.
b. the testes are the only site for the production of androgens.
c. estrogen enhances learning and memory.
d. estrogen and progesterone are produced only by females.
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1, 2.2
Rationale: Recent research indicates that the sex hormones, especially estrogen, may contribute to learning and memory by promoting the formation of new synapses in certain brain areas.

102. In general, the function of hormones is to
a. enable neurons to excite or inhibit each other.
b. modulate the effects of neurotransmitters.
c. affect the functioning of target organs and tissue.
d. reduce pain and promote pleasure.
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: Hormones are released directly into the bloodstream, which carries them to organs and cells that may be far from their point of origin.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

103. Chemical substances in the nervous system that are similar in structure and in action to opiates—such as heroin and morphine—are
a. hormones.
b. endorphins.
c. androgens.
d. neurotransmitters.
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: Endorphins are produced in the nervous system and are similar in structure and effect to the opiate drugs.

104. The primary effect of endorphins is to
a. reduce pain but also reduce pleasure.
b. heighten pain and reduce pleasure.
c. flatten mood and emotional expression.
d. reduce pain and promote pleasure.
Section: Communication in the Nervous System
Type: Factual **Answer: d**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: The opiate drugs and endorphins are both involved in decreasing pain and increasing a sense of pleasure or euphoria.

105. Endorphins have effects most similar to
a. heroin.
b. aspirin.
c. amphetamines.
d. marijuana.
Section: Communication in the Nervous System
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1, 2.1
Rationale: Endorphins are produced in the nervous system and are similar in structure and effect to the opiate drugs such as heroin.

106. Endorphins act primarily by
a. picking up serotonin from the synaptic cleft.
b. altering the effects of neurotransmitters.
c. blocking synaptic activity.
d. causing action potentials in neurons.
Section: Communication in the Nervous System
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: Endorphins are produced in the nervous system and alter the effects of neurotransmitters.

107. _____ is a neurotransmitter that increases heart rate and slows intestinal activity while an individual is stressed.
a. Serotonin
b. Dopamine

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

c. Acetylcholine
d. Norepinephrine
Section: Communication in the Nervous System
Type: Factual **Answer: d**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: One neurotransmitter that increases heart rate and slows intestinal activity during stress is norepinephrine.

108. Endorphins gave organisms with it an evolutionary advantage because they
a. eliminate pain when a painful stimulation is prolonged.
b. increase the output of energy during emotion and stress.
c. make pain bearable so that it doesn't interfere with actions in an emergency.
d. regulate the "biological clock" in the brain.
Section: Communication in the Nervous System
Type: Conceptual **Answer: c**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1, 2.1
Rationale: Endorphins give animals an adaptive advantage by making pain bearable when an organism is threatened. The body's built-in system of counteracting pain is only partly successful, though, especially when painful stimulation is prolonged.

109. Research has shown that endorphins
a. increase the distress felt when separated from a loved one.
b. increase the stress of interpersonal contact.
c. strengthen an infant's bond to its mother in animals.
d. are not related to social contact.
Section: Communication in the Nervous System
Type: Factual **Answer: c**
Level of Difficulty: Moderate
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Rationale: Research with animals suggests that in infancy, contact with the mother stimulates the flow of endorphins, which strengthens the infant's bond with her.

110. _____ is an approach used only with animals to study the brain.
a. Positron-emission tomography
b. Transcranial magnetic stimulation
c. Transcranial direct current stimulation
d. The lesion method
Section: Mapping the Brain
Type: Factual **Answer: d**
Level of Difficulty: Easy
LO 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results. APA 1.1, 1.2
Rationale: The lesion method involves the removal or disabling of a brain structure to gain a better understanding of its function. This method is used only with animals.

111. _____ is a procedure used by researchers as a "virtual" and temporary method to lesion the brain that temporarily inactivates neural circuits.
a. Transcranial magnetic stimulation
b. Functional magnetic resonance imaging
c. Electroencephalogram
d. Positron-emission tomography

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Section: Mapping the Brain
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results. APA 1.1
Rationale: Transcranial magnetic stimulation (TMS) is a method that creates a "virtual" lesion—a temporary one that does not involve removing or permanently disabling brain tissue. It can be used by researchers to temporarily inactivate neural circuits.

112. In _____, brain cells are stimulated using a powerful magnetic field produced by a wire coil placed on a person's head that temporarily inactivates neural circuits.
a. positron-emission tomography
b. functional magnetic resonance imaging
c. transcranial direct current stimulation
d. transcranial magnetic stimulation
Section: Mapping the Brain
Type: Factual **Answer: d**
Level of Difficulty: Easy
LO 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results. APA 1.1
Rationale: Transcranial magnetic stimulation is a method of stimulating brain cells, using a powerful magnetic field produced by a wire coil placed on a person's head.

113. _____ is a technique that applies a very small electric current to stimulate or suppress activity in parts of the brain's cortex.
a. TMS
b. tDCS
c. EEG
d. MRI
Section: Mapping the Brain
Type: Factual **Answer: b**
Level of Difficulty: Moderate
LO 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results. APA 1.1
Rationale: Transcranial direct current stimulation (tDCS) is a technique that applies a very small electric current to stimulate or suppress activity in parts of the brain's cortex.

114. Dr. Sampson is studying what happens behaviorally when a brain area is temporarily inactivated. Which method is she most likely to be using?
a. fMRI
b. PET scan
c. TMS
d. EEG
Section: Mapping the Brain
Type: Applied **Answer: c**
Level of Difficulty: Difficult
LO 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results. APA 1.1, 2.1, 2.2
Rationale: Transcranial magnetic stimulation (TMS) can temporarily inactivate brain cells and produce an image of the brain.

115. _____ is a recording of neural activity detected by electrodes for studying the brain.
a. TMS
b. tDCS
c. EEG
d. MRI

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Section: Mapping the Brain
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1
Rationale: An electroencephalogram (EEG) uses electrodes placed on the scalp to record electrical activity in the brain.

116. An EEG or brain-wave recording
a. can precisely locate the source of activity.
b. reflects the activities of only a few cells at a time.
c. is done with the help of electrodes taped onto the scalp.
d. is recorded by inserting needle electrodes into the brain.
Section: Mapping the Brain
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1
Rationale: EEG is carried out by taping electrodes onto the scalp to detect the simultaneous electrical activity of millions of neurons in particular brain regions. A standard EEG is useful but not very precise because it reflects the activities of so many cells at once.

117. Coin-shaped electrodes are pasted onto Melinda's scalp, and they are connected by wires to a machine that translates the electrical energy from her brain into wavy lines on a monitor. From this description, it is evident that Melinda's brain is being studied with the help of
a. positron-emission tomography.
b. functional magnetic resonance imaging.
c. transcranial direct current stimulation.
d. an electroencephalogram.
Section: Mapping the Brain
Type: Applied **Answer: d**
Level of Difficulty: Easy
LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1, 1.3
Rationale: An electroencephalogram (EEG) uses coin-like electrodes attached to the scalp to record brainwaves.

118. Dr. McCord is studying patterns of electrical activity in the brain, which are being translated into wavy lines on a screen. Which method is she most likely to be using?
a. fMRI
b. PET scan
c. TMS
d. EEG
Section: Mapping the Brain
Type: Applied **Answer: d**
Level of Difficulty: Easy
LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1
Rationale: An electroencephalogram (EEG) is a recording of neural activity detected by electrodes.

119. _____ records biochemical changes in the brain as they are happening, often using injections of a glucose-like substance containing a radioactive element.
a. ERP
b. EEG
c. PET
d. MRI

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Section: Mapping the Brain
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1
Rationale: A PET scan is used for analyzing biochemical activity in the brain, for example, by using injections of a glucose-like substance containing a radioactive element.

120. A PET scan
a. records brain waves through electrodes taped to the scalp.
b. records biochemical changes in the brain as they are happening.
c. stimulates the brain by producing a magnetic field through a wire coil.
d. uses radio frequencies and a magnetic field to produce images of the brain.
Section: Mapping the Brain
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1
Rationale: In a PET scan, a radioactively-labeled substance such as glucose is injected. The most active cells absorb the most glucose. Therefore, it is possible to scan the brain to see which cells are active in a particular task as changes are happening.

121. Lauren's physician refers her to a medical center in order to have the biochemical activity in her brain analyzed. She is given an injection of a glucose-like substance containing a radioactive element and her brain is then scanned. The technique being used is called
a. positron-emission tomography.
b. functional magnetic resonance imaging.
c. the lesion method.
d. electroencephalography.
Section: Mapping the Brain
Type: Applied **Answer: a**
Level of Difficulty: Easy
LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1
Rationale: In a PET scan, a radioactively-labeled substance such as glucose is injected. The most active cells absorb the most glucose. Therefore, it is possible to scan the brain to see which cells are active in a particular task.

122. Which technique uses radio frequencies and a magnetic field to produce images of the brain?
a. EEG
b. PET
c. MRI
d. TMS
Section: Mapping the Brain
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1
Rationale: Magnetic resonance imaging (MRI) uses powerful magnetic fields and radio frequencies to take highly detailed pictures of the brain.

123. Structural magnetic resonance imaging allows a scientist to
a. see brain activity associated with specific thoughts or behaviors.
b. study the consumption of glucose in different regions of the brain.
c. know what an individual's brain looks like.
d. detect electrical activity within a single cell.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Section: Mapping the Brain
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1, 2.2
Rationale: Structural MRI helps scientists study what the brain looks like, but not what it does.

124. A functional magnetic resonance imaging technique can capture brain changes
a. using radio frequencies to detect levels of blood oxygen in different brain areas.
b. using microelectrodes that are so fine they can be inserted into single cells.
c. by translating electrical energy from the brain into wavy lines on paper or a screen.
d. by following the temporary inactivation of neural circuits.
Section: Mapping the Brain
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1
Rationale: Functional magnetic resonance imaging (fMRI) is a type of magnetic resonance imaging used to study brain activity associated with specific thoughts and behaviors by detecting levels of blood oxygen. Because neurons use oxygen as fuel, active brain areas produce a bigger signal.

125. Which of the following is a reason for caution in using brain imaging technology?
a. Brain scans can only be used to study abnormal brains.
b. Brain scans tell us what is happening, but not precisely where it is happening.
c. Imaging technology can mask the variability among people's brains.
d. It is not known how safe repeated usage of brain scans is for an individual.
Section: Mapping the Brain
Type: Conceptual **Answer: c**
Level of Difficulty: Moderate
LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1, 2.1, 2.2
Rationale: Combining individual brain scans into one average scan—a common practice—can mask significant variability among people's brains.

126. Specialization of particular brain areas for particular roles is called
a. phrenology.
b. localization of function.
c. lateralization.
d. plasticity.
Section: A Tour Through the Brain
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1
Rationale: Localization of function refers to the fact that some functions can be associated with particular structures or areas within the brain.

127. Although Joseph Gall's theory of phrenology has been debunked, modern neuroscience does generally support Gall's assertion that
a. different brain parts are specialized to perform different functions.
b. personality traits are reflected in the development of specific bumps on the skull.
c. the left hemisphere and right hemisphere are mirror images of one another.
d. the left hemisphere is specialized for visual-spatial tasks.
Section: A Tour Through the Brain
Type: Factual **Answer: a**
Level of Difficulty: Easy

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1, 1.2, 2.2
Rationale: The phrenologist Joseph Gall tried to identify the function of each particular area of the brain. This is referred to as "localization of function." Gall's theory of phrenology was completely wrongheaded, but his general notion of specialization in the brain had merit.

128. Which of the following structures is part of the brain stem?
a. amygdala
b. medulla
c. thalamus
d. hypothalamus
Section: A Tour Through the Brain
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1
Rationale: The brain stem looks like a stalk rising out of the spinal cord. Pathways to and from upper areas of the brain pass through its two main structures: the medulla and the pons.

129. Which part of the brain is located at the base of the skull and looks like a stalk rising out of the spinal cord?
a. amygdala
b. brain stem
c. hypothalamus
d. thalamus
Section: A Tour Through the Brain
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1
Rationale: The brain stem is an older part of the brain located directly above the spinal cord.

130. The two main structures of the brain stem are the
a. hippocampus and the amygdala.
b. cerebellum and the thalamus.
c. thalamus and the hypothalamus.
d. medulla and the pons.
Section: A Tour Through the Brain
Type: Factual **Answer: d**
Level of Difficulty: Easy
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1
Rationale: The most important structures in the brain stem are the medulla and the pons. The other structures listed are not part of the brain stem.

131. The _____ is a structure in the brain stem that is involved in activities like sleeping, waking, and dreaming.
a. medulla
b. pons
c. thalamus
d. cerebellum
Section: A Tour Through the Brain
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1
Rationale: The pons is involved in sleeping, waking, and dreaming, among other things.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

132. The _____ is a structure in the brain stem responsible for certain automatic functions, such as breathing and heart rate.
a. reticular activating system
b. pons
c. medulla
d. cerebellum
Section: A Tour Through the Brain
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1
Rationale: The medulla controls vital reflexes such as breathing and heart rate.

133. Regina suffered brain damage in a car accident. As a result, she can no longer breathe on her own and needs the help of a respirator. Which structure was most likely damaged?
a. pons
b. medulla
c. cerebellum
d. reticular activating system
Section: A Tour Through the Brain
Type: Applied **Answer: b**
Level of Difficulty: Easy
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1, 2.1, 2.2
Rationale: The medulla controls vital reflexes such as breathing and heart rate.

134. A dense network of neurons found in the core of the brain stem that arouses the cortex and screens incoming information is called the
a. pons.
b. cerebellum.
c. reticular activating system.
d. medulla.
Section: A Tour Through the Brain
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1
Rationale: The reticular activating system in the core of the brain stem is involved in arousal. It also screens incoming sensory information.

135. Dawson suffered brain damage in a car accident. As a result, he is clumsy and uncoordinated. Which structure was most likely damaged?
a. hippocampus
b. medulla
c. cerebellum
d. reticular activating system
Section: A Tour Through the Brain
Type: Applied **Answer: c**
Level of Difficulty: Easy
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1, 2.1
Rationale: The cerebellum is involved in motor coordination, posture, and balance. The reticular activating system in the core of the brain stem is involved in arousal.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

136. Harley is exceedingly clumsy and uncoordinated. She has difficulty using a pencil or threading a needle. It is most likely that Harley's _____ has been damaged.
a. hippocampus
b. medulla
c. reticular activating system
d. cerebellum
Section: A Tour Through the Brain
Type: Applied **Answer: d**
Level of Difficulty: Easy
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1, 2.1
Rationale: The cerebellum is involved in motor coordination, posture, and balance.

137. The _____, or "lesser brain," is involved in remembering simple skills and acquired reflexes.
a. pons
b. medulla
c. reticular activating system
d. cerebellum
Section: A Tour Through the Brain
Type: Factual **Answer: d**
Level of Difficulty: Moderate
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1
Rationale: In addition to being involved in motor coordination, posture, and balance, the cerebellum is involved in remembering simple skills and acquired reflexes. Its name means "lesser brain."

138. The _____ was once considered just a motor center, but evidence has accumulated that it also plays a part in perceptual processes, working memory, and speech and language.
a. pons
b. medulla
c. auditory cortex
d. cerebellum
Section: A Tour Through the Brain
Type: Factual **Answer: d**
Level of Difficulty: Moderate
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1, 2.2
Rationale: The cerebellum, which was once considered just a motor center, is not as "lesser" as its name implies; it is involved in perceptual processes, working memory, and speech and language.

139. A ballerina will rely primarily on which brain area that is involved in regulating balance?
a. hypothalamus
b. pons
c. cerebellum
d. thalamus
Section: A Tour Through the Brain
Type: Conceptual **Answer: c**
Level of Difficulty: Moderate
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1, 2.1
Rationale: The cerebellum regulates movement and balance and is involved in some kinds of higher cognitive tasks.

140. Which structure acts as the sensory relay station of the brain and is involved in routing incoming sensory messages to higher areas in charge of vision, sound, or touch?
a. thalamus

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

b. cerebellum
c. hypothalamus
d. limbic system
Section: A Tour Through the Brain
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.4.B Describe the structure, function, and location of the thalamus. APA 1.1
Rationale: The thalamus is the sensory relay station of the brain. As sensory messages come into the brain, the thalamus directs them to higher areas in charge of vision, sound, or touch.

141. The only sense that completely bypasses the thalamus in the brain is the sense of
a. vision.
b. smell.
c. touch.
d. taste.
Section: A Tour Through the Brain
Type: Factual **Answer: b**
Level of Difficulty: Moderate
LO 2.4.B Describe the structure, function, and location of the thalamus. APA 1.1
Rationale: The only sensory system that sends information directly to cortex without first going to the thalamus is the sense of smell.

142. The reason why particular odors, such as the smell of gardenias, often rekindle memories of important personal experiences might be because
a. the smell areas of the human brain are more highly developed than the other sensory areas.
b. odors are processed in the cerebellum.
c. the thalamus gives priority processing to the sense of smell.
d. the olfactory bulb is directly connected to areas involved in emotion.
Section: A Tour Through the Brain
Type: Conceptual **Answer: d**
Level of Difficulty: Easy
LO 2.4.B Describe the structure, function, and location of the thalamus. APA 1.1, 2.1, 2.2
Rationale: The olfactory bulb has connections to areas involved in emotion. Therefore, particular odors may acquire emotional associations.

143. The _____ constantly monitors the body's current state and issues instructions to help the body maintain homeostasis.
a. hypothalamus
b. thalamus
c. cerebellum
d. limbic system
Section: A Tour Through the Brain
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.4.C Describe the structure, function, and location of the hypothalamus and pituitary gland. APA 1.1
Rationale: The hypothalamus is the body's boss, constantly monitoring the body's current state and issuing instructions to help the body maintain a steady state called homeostasis.

144. Which structure in the brain controls the pituitary gland through chemical signals?
a. thalamus
b. cerebellum
c. hypothalamus
d. limbic system
Section: A Tour Through the Brain
Type: Factual **Answer: c**

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Level of Difficulty: Easy
LO 2.4.C Describe the structure, function, and location of the hypothalamus and pituitary gland.
APA 1.1
Rationale: The hypothalamus is an extremely important area in the brain that controls the hormones of the body through its control of the pituitary gland.

145. The _____ is the structure in the brain involved in basic survival drives including feeding, fighting, fleeing, and sex.
a. reticular activating system
b. hypothalamus
c. parietal lobes
d. temporal lobes
Section: A Tour Through the Brain
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.4.C Describe the structure, function, and location of the hypothalamus and pituitary gland.
APA 1.1
Rationale: The hypothalamus is the area in the brain that is involved in basic survival drives associated with feeding, fighting, fleeing, and sex.

146. The _____ in the brain regulate(s) body temperature by triggering sweating or shivering and also control(s) the complex operations of the autonomic nervous system.
a. hypothalamus
b. reticular activating system
c. parietal lobes
d. temporal lobes
Section: A Tour Through the Brain
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.4.C Describe the structure, function, and location of the hypothalamus and pituitary gland.
APA 1.1
Rationale: The hypothalamus regulates body temperature by triggering sweating or shivering, and it controls the complex operations of the autonomic nervous system.

147. The _____ in the brain contain(s) the biological clock that controls the body's daily rhythms.
a. parietal lobes
b. amygdala
c. reticular activating system
d. hypothalamus
Section: A Tour Through the Brain
Type: Factual **Answer: d**
Level of Difficulty: Moderate
LO 2.4.C Describe the structure, function, and location of the hypothalamus and pituitary gland.
APA 1.1
Rationale: The hypothalamus contains the biological clock that controls the body's daily rhythms.

148. Hanging down from the hypothalamus in the human brain, connected to it by a short stalk, is a cherry-sized endocrine gland called the
a. olfactory bulb.
b. pineal gland.
c. pituitary gland.
d. temporal lobe.
Section: A Tour Through the Brain
Type: Factual **Answer: c**
Level of Difficulty: Easy

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

LO 2.4.C Describe the structure, function, and location of the hypothalamus and pituitary gland. APA 1.1
Rationale: The pituitary gland is attached to the hypothalamus on the underside of the brain.

149. The _____ is often called the body's "master gland" because the hormones it secretes affect many other endocrine glands.
a. olfactory bulb
b. pineal gland
c. pituitary gland
d. temporal lobe
Section: A Tour Through the Brain
Type: Factual **Answer: c**
Level of Difficulty: Moderate
LO 2.4.C Describe the structure, function, and location of the hypothalamus and pituitary gland. APA 1.1
Rationale: The pituitary is often called the body's "master gland" because the hormones it secretes affect many other endocrine glands.

150. The _____ is sometimes called "the emotional brain," although researchers have discovered it has functions unrelated to emotions.
a. thalamus
b. medulla
c. reticular activating system
d. limbic system
Section: A Tour Through the Brain
Type: Factual **Answer: d**
Level of Difficulty: Easy
LO 2.4.C Describe the structure, function, and location of the hypothalamus and pituitary gland. APA 1.1
Rationale: Structures in the limbic system are involved in the emotions that we share with other animals, such as rage and fear, so the region is also sometimes called "the emotional brain." But researchers now know that these structures also have other functions, and that parts of the brain outside of the old limbic system are involved in emotion.

151. The initial decision to approach or withdraw from a person or situation is taken with the help of the _____.
a. amygdala
b. pons
c. hippocampus
d. cerebellum
Section: A Tour Through the Brain
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.4.D Describe the structure, function, and location of the amygdala. APA 1.1, 2.1
Rationale: The amygdala is involved in evaluating the emotional importance of sensory information and influencing decisions to approach or avoid a stimulus.

152. The _____ is described by some people as the brain's "fear center."
a. hypothalamus
b. cerebellum
c. hippocampus
d. amygdala
Section: A Tour Through the Brain
Type: Factual **Answer: d**
Level of Difficulty: Easy
LO 2.4.D Describe the structure, function, and location of the amygdala. APA 1.1

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Rationale: Some people describe the amygdala as the brain's "fear center."

153. Which structure in the brain has the ability to combine components of sight, sound, and feelings and bind them together into one "memory"?
a. amygdala
b. thalamus
c. hippocampus
d. cerebrum
Section: A Tour Through the Brain
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.4.E Describe the structure, function, and location of the hippocampus. APA 1.1
Rationale: The hippocampus is a key brain structure in the formation of new memories. It enables us to take in and combine different components of experiences—sights, sounds, and feelings—and bind them together into one "memory."

154. The _____ is the brain structure involved in the storage of new information in memory.
a. hippocampus
b. thalamus
c. medulla
d. hypothalamus
Section: A Tour Through the Brain
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.4.E Describe the structure, function, and location of the hippocampus. APA 1.1
Rationale: The hippocampus is a key memory structure in the brain, and has often been called the "gateway to memory."

155. Carmen had a stroke that caused damage to her brain. As a result, she can longer form new memories about people she meets or information she learns. Which part of Carmen's brain is most likely damaged?
a. hippocampus
b. pons
c. cerebellum
d. thalamus
Section: A Tour Through the Brain
Type: Applied **Answer: a**
Level of Difficulty: Moderate
LO 2.4.E Describe the structure, function, and location of the hippocampus. APA 1.1, 2.1
Rationale: The hippocampus is a key memory structure in the brain, and has often been called the "gateway to memory." Carmen's case is similar to the real-life case of Henry Molaison (H.M.), who could no longer form new memories for facts and events following the removal of his hippocampus.

156. The _____ is the upper part of the brain above the pons and cerebellum and is in charge of most sensory, motor, and cognitive processes.
a. cerebrum
b. thalamus
c. amygdala
d. hippocampus
Section: A Tour Through the Brain
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.4.F: Describe the structure of the cerebrum, and explain the function of the corpus callosum. APA 1.1
Rationale: The cerebrum refers to the upper part of the brain above the pons and cerebellum. It is divided into two hemispheres and is in charge of most sensory, motor, and cognitive processes.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

157. The cerebrum is divided into two separate halves that are connected by a large band of fibers called the
a. thalamus.
b. hypothalamus.
c. hippocampus.
d. corpus callosum.
Section: A Tour Through the Brain
Type: Factual **Answer: d**
Level of Difficulty: Easy
LO 2.4.F: Describe the structure of the cerebrum, and explain the function of the corpus callosum.
APA 1.1
Rationale: The corpus callosum connects the two halves of cerebral cortex, allowing them to communicate with each other.

158. Lateralization takes place in the
a. cerebrum.
b. amygdala.
c. hippocampus.
d. cerebral cortex.
Section: A Tour Through the Brain
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.4.F: Describe the structure of the cerebrum, and explain the function of the corpus callosum.
APA 1.1
Rationale: Lateralization is the specialization of the two cerebral hemispheres for particular operations.

159. Generally speaking, the _____ hemisphere in the brain is in charge of the left side of the body.
a. left
b. right
c. frontal
d. rear
Section: A Tour Through the Brain
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.4.F: Describe the structure of the cerebrum, and explain the function of the corpus callosum.
APA 1.1
Rationale: In general, each half of the cerebral cortex controls and receives sensory input from the opposite side of the body.

160. Lateralization is defined as the
a. interaction between the two cerebral hemispheres through a bundle of nerve fibers.
b. reception of visual information in the lower back area of the brain.
c. specialization of the two cerebral hemispheres for particular operations.
d. process by which various layers of densely-packed cells are formed within the cerebrum.
Section: A Tour Through the Brain
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.4.F: Describe the structure of the cerebrum, and explain the function of the corpus callosum.
APA 1.1
Rationale: Lateralization of function refers to the fact that each hemisphere is specialized for some activities.

161. The cerebrum is covered by several thin layers of densely-packed cells known collectively as the
a. thalamus.
b. hypothalamus.
c. cerebral cortex.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

d. corpus callosum.
Section: A Tour Through the Brain
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1
Rationale: The cerebrum is covered by several thin layers of densely-packed cells known collectively as the cerebral cortex.

162. The cortex in the human brain is about _____ millimeters in thickness.
a. 100
b. 50
c. 3
d. 1
Section: A Tour Through the Brain
Type: Factual **Answer: c**
Level of Difficulty: Difficult
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1
Rationale: Although cortex is only about one-eighth of an inch (3 mm) thick, it contains almost three-quarters of the cells in the brain.

163. The purpose of the human brain having so many deep crevices and wrinkles in the cortex is that
a. it allows the amygdala to be able to regulate the person's initial emotional responses.
b. people would have difficulty performing bodily functions that are not consciously willed.
c. it enables the brain to contain its billions of neurons in a compact space.
d. fetuses would die prenatally because the hypothalamus wouldn't be able to regulate the autonomic nervous system.
Section: A Tour Through the Brain
Type: Conceptual **Answer: c**
Level of Difficulty: Moderate
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1, 2.1, 2.2
Rationale: The cortex has many deep crevices and wrinkles, which enable it to contain its billions of neurons in a compact space.

164. Which of the following regions in the brain contains the visual cortex?
a. temporal lobes
b. parietal lobes
c. frontal lobes
d. occipital lobes
Section: A Tour Through the Brain
Type: Factual **Answer: d**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1
Rationale: The occipital lobes are specialized for processing visual information.

165. Damage to the occipital lobes may result in difficulty with
a. language comprehension.
b. speech production.
c. feeling pain and pressure.
d. sight.
Section: A Tour Through the Brain
Type: Conceptual **Answer: d**
Level of Difficulty: Moderate

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1, 2.1
Rationale: The occipital lobes are specialized for processing visual information.

166. The _____ contain the somatosensory cortex and are located at the top of the brain.
a. temporal lobes
b. occipital lobes
c. frontal lobes
d. parietal lobes
Section: A Tour Through the Brain
Type: Factual **Answer: d**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1
Rationale: The parietal lobes are at the top of the brain. They contain the somatosensory cortex, which receives information about pressure, pain, touch, and temperature from all over the body.

167. Which of the following regions in the brain contains the somatosensory cortex, which receives information about pressure, pain, touch, and temperature from all over the body?
a. temporal lobes
b. parietal lobes
c. frontal lobes
d. occipital lobes
Section: A Tour Through the Brain
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1
Rationale: The parietal lobes contain somatosensory cortex, which processes all the sensory information received from the skin.

168. Which of the following regions in the brain contains the auditory cortex?
a. temporal lobes
b. parietal lobes
c. frontal lobes
d. occipital lobes
Section: A Tour Through the Brain
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1
Rationale: Processing of auditory information occurs in the temporal lobes.

169. Which of the following regions in the brain is involved in language comprehension?
a. frontal lobes
b. parietal lobes
c. temporal lobes
d. occipital lobes
Section: A Tour Through the Brain
Type: Factual **Answer: c**
Level of Difficulty: Moderate
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1
Rationale: An area of the left temporal lobe known as Wernicke's area is involved in language comprehension.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

170. Which of the following regions in the brain contains the motor cortex, which issues orders to the muscles of the body to produce voluntary movement?
a. temporal lobes
b. parietal lobes
c. frontal lobes
d. occipital lobes
Section: A Tour Through the Brain
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1
Rationale: Motor cortex is located in the frontal lobes.

171. Which of the following regions in the brain is involved in the ability to make plans, think creatively, and take initiative?
a. frontal lobes
b. temporal lobes
c. parietal lobes
d. occipital lobes
Section: A Tour Through the Brain
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1
Rationale: The frontal lobes are important for planning, creative thinking, speech production, short-term memory, and other higher functions.

172. Which of the following regions contains a speech-production area known as Broca's area?
a. left temporal lobe
b. left frontal lobe
c. right frontal lobe
d. right temporal lobe
Section: A Tour Through the Brain
Type: Factual **Answer: b**
Level of Difficulty: Difficult
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1
Rationale: Broca's area, involved in speech production, is located in the left frontal lobe.

173. A surgeon is probing an area of association cortex in your brain with a stimulation probe. Which of the following would you most likely experience?
a. a sense of being gently touched
b. swirls of color
c. a bright flash of light
d. nothing at all
Section: A Tour Through the Brain
Type: Conceptual **Answer: d**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1, 2.1
Rationale: Although stimulation of sensory or motor areas can produce sensations or movements, stimulation of association areas typically produces no noticeable response.

174. A surgeon is probing the somatosensory cortex in your brain with a stimulation probe. Which of the following would you most likely experience?
a. a tingling in the skin

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

b. swirls of color
c. a bright flash of light
d. nothing at all
Section: A Tour Through the Brain
Type: Conceptual **Answer: a**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1, 2.1
Rationale: Stimulation of the somatosensory cortex can produce sensations of tingling in the skin or light touch.

175. Although it is relatively small in rodents, the _____ accounts for approximately one-third of the entire cortex in human beings.
a. motor cortex
b. prefrontal cortex
c. somatosensory cortex
d. primary visual cortex
Section: A Tour Through the Brain
Type: Factual **Answer: b**
Level of Difficulty: Difficult
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1
Rationale: The prefrontal cortex accounts for approximately one-third of the entire cortex in human beings.

176. The _____ is the most recently evolved part of our brains and is associated with such complex abilities as reasoning, decision making, and planning.
a. limbic cortex
b. somatosensory cortex
c. prefrontal cortex
d. thalamic cortex
Section: A Tour Through the Brain
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1
Rationale: The prefrontal cortex is the most recently evolved part of our brains, and is associated with such complex abilities as reasoning, decision making, and planning.

177. Parts of the _____ are involved in social judgment, rational decision making, and the ability to set goals and to make and carry through plans.
a. temporal lobes
b. parietal lobes
c. occipital lobes
d. frontal lobes
Section: A Tour Through the Brain
Type: Factual **Answer: d**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1
Rationale: The prefrontal cortex, part of the frontal lobes, is involved in social judgment, rational decision making, and the ability to set goals and to make and carry through plans.

178. Famously, Phineas Gage is believed to have experienced a dramatic personality change after his accident. Which area of his brain is thought to have been damaged?
a. frontal lobes

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

b. parietal lobes
c. occipital lobes
d. temporal lobes
Section: A Tour Through the Brain
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1, 1.2
Rationale: Gage is believed to have had damage to his frontal lobes, particularly the prefrontal area, as this area deals with personality.

179. Which of the following lobes of the brain is involved in the ability to do a series of tasks in proper sequence and then to stop doing these tasks at the proper time?
a. temporal lobes
b. parietal lobes
c. frontal lobes
d. occipital lobes
Section: A Tour Through the Brain
Type: Factual **Answer: c**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1
Rationale: The frontal lobes are involved in planning and carrying out a series of tasks in proper order and inhibiting actions when they are not appropriate.

180. After a serious head injury, Tonya faced difficulty in doing a series of tasks in the proper sequence. It is most likely that Tonya's _____ was injured.
a. occipital lobe
b. frontal lobe
c. parietal lobe
d. temporal lobe
Section: A Tour Through the Brain
Type: Applied **Answer: b**
Level of Difficulty: Moderate
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1, 2.1
Rationale: The frontal lobes are involved in planning and carrying out a series of tasks in proper order and inhibiting actions when they are not appropriate.

181. Patients with _____ hemisphere damage in the brain may have difficulties with reading, identifying objects, making symbolic gestures or pantomimes, and describing events in the correct order.
a. left
b. right
c. frontal
d. rear
Section: The Two Hemispheres of the Brain
Type: Factual **Answer: a**
Level of Difficulty: Moderate
LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres. APA 1.1
Rationale: Patients with left hemisphere damage may have difficulties with reading, identifying objects, making symbolic gestures or pantomimes, and describing events in the correct order.

182. Patients with _____ hemisphere damage in the brain may have difficulty identifying faces, interpreting emotional expressions in a face or voice, or understanding music or art.
a. left

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

b. right
c. frontal
d. rear
Section: The Two Hemispheres of the Brain
Type: Factual **Answer: b**
Level of Difficulty: Moderate
LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres. APA 1.1
Rationale: Patients with right hemisphere damage may have difficulty identifying faces, interpreting emotional expressions in a face or voice, or understanding music or art.

183. When Myers and Sperry severed the corpus callosum in cats, they found that
a. one side of the brain did not know what the other side was doing.
b. abnormal eating behaviors occurred because the cats could not regulate hunger.
c. the left side of the cats' bodies were not affected by this operation.
d. disorganized electrical activity spread from one hemisphere to the other.
Section: The Two Hemispheres of the Brain
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres. APA 1.1, 1.2
Rationale: Without the corpus callosum, the two hemispheres cannot communicate with each other.

184. Which of the following statements is true of the brain?
a. Patients with right hemisphere damage may have difficulties with reading and identifying objects.
b. Patients with left hemisphere damage may have difficulty identifying faces and understanding music or art.
c. Each hemisphere receives sensory input from the same side of the body, but controls the movement of the opposite side of the body.
d. The two hemispheres are similar in structure but are specialized for different functions.
Section: The Two Hemispheres of the Brain
Type: Conceptual **Answer: d**
Level of Difficulty: Moderate
LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres. APA 1.1, 2.1
Rationale: Although similar in structure, the left and the right hemispheres have somewhat separate talents, or areas of specialization.

185. The primary reason for initially performing split-brain surgery on humans was to
a. find out what each half of the brain can do, cut off from the other.
b. reduce the seizures in patients with debilitating, uncontrollable epilepsy.
c. find out whether the two hemispheres would develop an alternate means of communication.
d. reduce the tremors, stiffness, and rigidity of severe Parkinson's disease.
Section: The Two Hemispheres of the Brain
Type: Conceptual **Answer: b**
Level of Difficulty: Moderate
LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres. APA 1.1, 1.2
Rationale: The split-brain operation is performed on humans to control severe epilepsy that cannot be controlled by medication.

186. Researchers took photographs of different faces, cut them down the middle vertically, and pasted different halves together to form composite faces. The reconstructed photographs were flashed quickly to split-brain patients. It was found that the split-brain patients would
a. name the person in the left part of the image and point with the right hand to the left image.
b. name the person in the right part of the image and point with the left hand to the left image.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

c. name the person in the right part of the image and point with the right hand to the left image.
d. name the person in the left part of the image and point with the left hand to the right image.
Section: The Two Hemispheres of the Brain
Type: Conceptual **Answer: b**
Level of Difficulty: Difficult
LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres. APA 1.1, 2.2
Rationale: In the split-brain patient, each hemisphere perceives information in the opposite half of the visual field. Thus, they can verbally describe only what they see in the right half of the visual field, though they can indicate, with their left hand, what they saw in the left half of the visual field.

187. If you look straight ahead, then everything in the left side of the scene before you goes to the
a. right half of your brain.
b. left half of your brain.
c. front half of your brain.
d. top half of your brain.
Section: The Two Hemispheres of the Brain
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres. APA 1.1
Rationale: Each hemisphere perceives information in the opposite half of the visual field.

188. The _____ half of the brain has been called an "interpreter" because one of its major roles is to provide a reasonable story to explain one's thoughts, feelings, and behaviors.
a. left
b. right
c. front
d. back
Section: The Two Hemispheres of the Brain
Type: Factual **Answer: a**
Level of Difficulty: Moderate
LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres. APA 1.1, 2.2
Rationale: Michael Gazzaniga has called the left hemisphere an "interpreter," because one of its major roles is to continually provide a reasonable story to explain our thoughts, feelings, and behaviors.

189. Linguistic and analytic skills are typically handled by the
a. right half of your brain.
b. left half of your brain.
c. top half of your brain.
d. back half of your brain.
Section: The Two Hemispheres of the Brain
Type: Factual **Answer: b**
Level of Difficulty: Easy
LO 2.5.B Describe why the two hemispheres of the brain are allies rather than opposites. APA 1.1
Rationale: For most people, language is primarily a left hemisphere function, while the right hemisphere is more important for processing spatial information, including recognizing faces.

190. The best split-brain researchers would agree that
a. the mental skills of the left hemisphere are superior to those of the right hemisphere.
b. in normal brains, the left and right hemispheres cooperate naturally in everyday activities.
c. the mental skills of the right hemisphere are superior to those of the left hemisphere.
d. the left hemisphere and the right hemisphere are exactly the same.
Section: The Two Hemispheres of the Brain

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Type: Conceptual **Answer: b**
Level of Difficulty: Moderate
LO 2.5.B Describe why the two hemispheres of the brain are allies rather than opposites. APA 1.1, 2.1, 2.2, 2.4
Rationale: Though they have different specializations, the right and left hemispheres normally work together cooperatively. Although early researchers often spoke of the left hemisphere as dominant, especially because of its linguistic and analytic talents, over the years it has become clear that the right hemisphere is far from stupid or passive.

191. The right hemisphere of the brain
a. excels in the ability to read facial expressions.
b. has a "mental module" that constantly tries to explain actions that are nonverbal.
c. excels in logical, sequential, and symbolic tasks, such as solving math problems.
d. is responsible for language processing in most individuals.
Section: The Two Hemispheres of the Brain
Type: Factual **Answer: a**
Level of Difficulty: Easy
LO 2.5.B Describe why the two hemispheres of the brain are allies rather than opposites. APA 1.1
Rationale: For most people, the right hemisphere is more important for processing spatial information, including recognizing faces, and perceiving emotional expressions.

192. Which of the following is true?
a. Our brains are fully formed at birth.
b. Adulthood is the greatest period of plasticity for the brain.
c. Our experiences can change the "wiring" of our brains.
d. Human brains lose the ability to physically change in adulthood.
Section: The Flexible Brain
Type: Conceptual **Answer: c**
Level of Difficulty: Easy
LO 2.6.A Define neural plasticity, and summarize some of the main evidence that the brain has the ability to change in response to new experiences. APA 1.1, 2.1
Rationale: Although plasticity is most pronounced during infancy, the brain remains capable of rewiring in response to experiences throughout our lives.

193. The brain's ability to change and adapt in response to experience, through neurogenesis, or by reorganizing or growing new neural connections, is called
a. constructivism.
b. proliferation.
c. optimization.
d. plasticity.
Section: The Flexible Brain
Type: Factual **Answer: d**
Level of Difficulty: Easy
LO 2.6.A Define neural plasticity, and summarize some of the main evidence that the brain has the ability to change in response to new experiences. APA 1.1
Rationale: Plasticity is the brain's ability to change in response to new experiences.

194. Which of the following is true regarding the effects of culture on the brain?
a. Bilingual people use different parts of their brains for their two languages.
b. Illiterate individuals tend to have more white matter in a part of the parietal cortex.
c. Technological literacy cannot affect brain activity.
d. The patterns of brain activity during mathematical processing are the same in all humans.
Section: The Flexible Brain
Type: Conceptual **Answer: a**
Level of Difficulty: Easy
LO 2.6.B Discuss the relationship between cultural forces and brain function. APA 1.1, 2.1, 2.5

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Rationale: Research has shown that different brain areas are involved in a first language versus a second language.

195. Which of the following statements is true regarding sex differences in the brain?
a. The brains of males and females do not differ.
b. There are biochemical differences, but not anatomical differences, between male and female brains.
c. Males are more likely to be right-brained and females are more likely to be left-brained.
d. Ideology often gets in the way of interpreting research on sex differences and the brain.
Section: The Flexible Brain
Type: Conceptual **Answer: d**
Level of Difficulty: Moderate
LO 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior. APA 1.1, 2.1, 2.2, 2.5
Rationale: Ideology often gets in the way of interpreting research on sex differences and the brain. Some people worry that the research can be used to justify sexism and others argue that ignoring the evidence is antiscientific.

196. As a critical thinker in psychology, it is important to recognize that
a. the overlap between the sexes is less than the differences between them.
b. biological differences between the sexes always have implications for behavior.
c. brain differences could be the result, not the cause, of behavioral differences between the sexes.
d. animal studies show that sex differences in the brain do not affect behavior.
Section: The Flexible Brain
Type: Conceptual **Answer: c**
Level of Difficulty: Moderate
LO 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior. APA 1.1, 2.1, 2.2
Rationale: Some male-female differences in the brain can be the result, rather than the cause, of behavioral differences.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

True-False Questions

1. One of the functions of a nervous system is to gather and process information.
Section: The Nervous System: A Basic Blueprint
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. APA 1.1

2. The central nervous system consists of the brain and the spinal cord.
Section: The Nervous System: A Basic Blueprint
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. APA 1.1

3. The spinal cord acts as a bridge between the brain and the parts of the body below the neck.
Section: The Nervous System: A Basic Blueprint
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. APA 1.1

4. All reflexes are produced by the spinal cord.
Section: The Nervous System: A Basic Blueprint
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. APA 1.1

5. Erection in men is a spinal reflex.
Section: The Nervous System: A Basic Blueprint
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. APA 1.1

6. Spinal reflexes are automatic and cannot be influenced by thoughts and emotions.
Section: The Nervous System: A Basic Blueprint
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. APA 1.1

7. The peripheral nervous system is a collection of neurons and supportive tissue running from the base of the brain down the center of the back.
Section: The Nervous System: A Basic Blueprint
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1

8. Motor nerves carry messages from special receptors in the skin to the spinal cord.
Section: The Nervous System: A Basic Blueprint
Type: Factual **Answer: False**
Level of Difficulty: Easy

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1

9. Sensory nerves put us in touch with both the outside world and with the activities within our own bodies.
Section: The Nervous System: A Basic Blueprint
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1

10. The somatic nervous system is sometimes called the skeletal nervous system.
Section: The Nervous System: A Basic Blueprint
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions.
APA 1.1

11. When you feel a bug on your arm, your somatic nervous system is critical to the sensation.
Section: The Nervous System: A Basic Blueprint
Type: Conceptual **Answer: True**
Level of Difficulty: Easy
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1, 2.1

12. The sympathetic nervous system enables the body to conserve and store its energy.
Section: The Nervous System: A Basic Blueprint
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1

13. The parasympathetic nervous system mobilizes the body for action.
Section: The Nervous System: A Basic Blueprint
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1

14. Activation of the sympathetic nervous system pushes up the body's heart rate and blood pressure.
Section: The Nervous System: A Basic Blueprint
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1

15. The somatic nervous system regulates the functioning of the internal organs.
Section: The Nervous System: A Basic Blueprint
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1

16. The autonomic nervous system controls skeletal muscles.
Section: The Nervous System: A Basic Blueprint
Type: Factual **Answer: False**

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Level of Difficulty: Easy
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1

17. The sympathetic nervous system acts like an accelerator on a car, mobilizing the body for action.
Section: The Nervous System: A Basic Blueprint
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1

18. Neurons are also called nerve cells.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.A Compare the functions of neurons and glial cells. APA 1.1

19. Neurons greatly outnumber glial cells.
Section: Communication in the Nervous System
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.2.A Compare the functions of neurons and glial cells. APA 1.1

20. Glial cells hold the neurons in place.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.A Compare the functions of neurons and glial cells. APA 1.1

21. An adult brain contains about 100 billion nerve cells.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Difficult
LO 2.2.A Compare the functions of neurons and glial cells. APA 1.1

22. Many axons are insulated by a surrounding layer of fatty material called the myelin sheath.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1

23. Axons commonly divide at the end into branches called axon terminals.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1

24. One purpose of the myelin sheath is to prevent signals in adjacent cells from interfering with each other.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1

25. In individuals with multiple sclerosis, dense build-ups of myelin on the axon cause erratic nerve signals.
Section: Communication in the Nervous System
Type: Factual **Answer: False**

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Level of Difficulty: Easy
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1

26. In the peripheral nervous system, the fibers of individual neurons are collected together in bundles called nerves.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1

27. The human body has 43 pairs of peripheral nerves.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1

28. Neurons in the central nervous system can neither reproduce nor regenerate.
Section: Communication in the Nervous System
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.2.C Explain how stem cells contribute to the process of neurogenesis. APA 1.1

29. Central nervous system cells cannot be produced after infancy.
Section: Communication in the Nervous System
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.2.C Explain how stem cells contribute to the process of neurogenesis. APA 1.1

30. Stem cells are immature cells that have the potential to develop into mature cells of various types.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.C Explain how stem cells contribute to the process of neurogenesis. APA 1.1

31. Neurogenesis is the process by which dopamine molecules cross the blood-brain barrier.
Section: Communication in the Nervous System
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.2.C Explain how stem cells contribute to the process of neurogenesis. APA 1.1

32. Given encouraging environments, stem cells from early embryos can develop into any cell type.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.C Explain how stem cells contribute to the process of neurogenesis. APA 1.1

33. Synaptic vesicles are tiny sacs in the tip of the axon terminals.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1

34. A neuron at rest is neutral in charge.
Section: Communication in the Nervous System
Type: Factual **Answer: False**

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Level of Difficulty: Easy
LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1

35. In myelinated axons, the action potential appears to "hop" from one node to the next.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1

36. Nerve impulses travel more slowly in babies than in older children and adults.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Moderate
LO 2.2.D: Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1

37. Neurotransmitters make it possible for one neuron to excite or inhibit another.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

38. Neurotransmitters exist only in the brain and spinal cord.
Section: Communication in the Nervous System
Type: Factual **Answer: False**
Level of Difficulty: Moderate
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

39. The nature of the effect of a neurotransmitter depends on the type of receptor it binds with.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

40. Serotonin affects neurons involved in appetite and pain suppression.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

41. Acetylcholine affects neurons involved in arousal, and is also involved in muscle action.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

42. Glutamate functions as the major inhibitory neurotransmitter in the brain.
Section: Communication in the Nervous System
Type: Factual **Answer: False**

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

43. Glutamate is the major excitatory neurotransmitter in the brain.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

44. People with Alzheimer's disease lose brain cells responsible for producing acetylcholine.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

45. A loss of cells that produce norepinephrine is responsible for the tremors and rigidity of Parkinson's disease.
Section: Communication in the Nervous System
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

46. Serotonin levels will decrease after a protein-rich meal.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Moderate
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

47. Hormones are chemical substances secreted by glands that affect the functioning of organs.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

48. Norepinephrine may be considered either a neurotransmitter or a hormone.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Moderate
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

49. Melatonin is secreted by the pituitary gland.
Section: Communication in the Nervous System
Type: Factual **Answer: False**
Level of Difficulty: Moderate
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

50. Melatonin helps to regulate daily biological rhythms and promotes sleep.
Section: Communication in the Nervous System

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1, 1.3

51. Adrenal hormones are produced by the pineal gland.
Section: Communication in the Nervous System
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

52. Melatonin facilitates the ejection of milk during nursing.
Section: Communication in the Nervous System
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

53. Androgens are feminizing hormones that bring about physical change in females at puberty.
Section: Communication in the Nervous System
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

54. Progesterone contributes to the growth and maintenance of the uterine lining in preparation for a fertilized egg.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

55. The fluctuating levels of estrogens and progesterone make women emotional before menstruation.
Section: Communication in the Nervous System
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

56. Cortisol produced by the outer part of each adrenal gland increases blood-sugar levels.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

57. Hormones have effects similar to natural opiates.
Section: Communication in the Nervous System
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

58. Endorphins reduce pain and promote pleasure.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

59. Most endorphins act by limiting or prolonging the effects of neurotransmitters.
Section: Communication in the Nervous System
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

60. Endorphin levels decrease considerably when an animal or a person is afraid or under stress.
Section: Communication in the Nervous System
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1

61. The lesion method of studying the brain is often used with human participants.
Section: Mapping the Brain
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results. APA 1.1

62. Transcranial magnetic stimulation uses a powerful magnetic field in order to temporarily inactivate neural circuits in the brain.
Section: Mapping the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results. APA 1.1

63. A recording of neural activity detected by electrodes is called an electroencephalogram.
Section: Mapping the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1

64. Magnetic resonance imaging involves using radio frequencies to take highly detailed pictures of bodily organs.
Section: Mapping the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1

65. Magnetic resonance imaging involves the injection of a glucose-like substance containing a radioactive element into the brain.
Section: Mapping the Brain
Type: Factual **Answer: False**
Level of Difficulty: Easy

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1

66. Positron-emission tomography is a method for analyzing the biochemical activity in the brain.
Section: Mapping the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1

67. A structural MRI allows us to see brain activity associated with specific thoughts or behaviors.
Section: Mapping the Brain
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1

68. Functional MRI can tell where something is happening in the brain better than an EEG.
Section: Mapping the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1, 2.1

69. If researchers do not use the correct statistical procedures, it is possible for an fMRI to detect effects where none exists.
Section: Mapping the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1, 2.1, 2.2

70. The concept of "localization of function" can be traced back to Joseph Gall's theory of phrenology.
Section: A Tour Through the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1, 1.2

71. The part of the brain at the base of the skull is called the thalamus.
Section: A Tour Through the Brain
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1

72. The medulla and the pons are the two main structures of the brain stem.
Section: A Tour Through the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1

73. The medulla is responsible for breathing and heart rate.
Section: A Tour Through the Brain
Type: Factual **Answer: True**

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Level of Difficulty: Easy
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1

74. The pons is responsible for bodily functions that do not have to be consciously willed, such as breathing and heart rate.
Section: A Tour Through the Brain
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1

75. Without the reticular activating system in our brain, we would not be alert.
Section: A Tour Through the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1, 2.1

76. If your cerebellum were damaged, you would become exceedingly clumsy and uncoordinated.
Section: A Tour Through the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1, 2.1

77. The thalamus is a brain structure that relays sensory messages to the cerebral cortex.
Section: A Tour Through the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.4.B Describe the structure, function, and location of the thalamus. APA 1.1

78. The only sense that completely bypasses the thalamus in the brain is touch.
Section: A Tour Through the Brain
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.4.B Describe the structure, function, and location of the thalamus. APA 1.1

79. The thalamus is a brain structure involved in emotions and drives that are vital for survival.
Section: A Tour Through the Brain
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.4.C Describe the structure, function, and location of the hypothalamus and pituitary gland. APA 1.1

80. A cherry-sized endocrine gland called the pineal gland hangs down from the hypothalamus.
Section: A Tour Through the Brain
Type: Factual **Answer: False**
Level of Difficulty: Moderate
LO 2.4.C Describe the structure, function, and location of the hypothalamus and pituitary gland. APA 1.1

81. The pituitary gland is often called the body's "master gland."
Section: A Tour Through the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

LO 2.4.C Describe the structure, function, and location of the hypothalamus and pituitary gland. APA 1.1

82. The amygdala is involved in the arousal and regulation of emotion.
Section: A Tour Through the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.4.D Describe the structure, function, and location of the amygdala. APA 1.1

83. The hippocampus is an important memory structure in the brain.
Section: A Tour Through the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.4.E Describe the structure, function, and location of the hippocampus. APA 1.1

84. The upper part of the brain above the pons and cerebellum is the cerebrum.
Section: A Tour Through the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.4.F Describe the structure of the cerebrum, and explain the function of the corpus callosum. APA 1.1

85. The left cerebral hemisphere is in charge of the left side of the body and the right cerebral hemisphere is in charge of the right side of the body.
Section: A Tour Through the Brain
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.4.F Describe the structure of the cerebrum, and explain the function of the corpus callosum. APA 1.1

86. The corpus callosum is the bundle of nerve fibers that connect the two cerebral hemispheres.
Section: A Tour Through the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.4.F Describe the structure of the cerebrum, and explain the function of the corpus callosum. APA 1.1

87. The process by which the two cerebral hemispheres communicate with one another is known as lateralization.
Section: A Tour Through the Brain
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.4.F Describe the structure of the cerebrum, and explain the function of the corpus callosum. APA 1.1

88. The cerebrum is covered by several thin layers of densely-packed cells known collectively as the corpus callosum.
Section: A Tour Through the Brain
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.4.F Describe the structure of the cerebrum, and explain the function of the corpus callosum. APA 1.1

89. The gray matter in the brain consists of long, myelin-covered axons.
Section: A Tour Through the Brain
Type: Factual **Answer: False**

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1

90. The cortex contains almost three-fourths of all the cells in the human brain.
Section: A Tour Through the Brain
Type: Factual **Answer: True**
Level of Difficulty: Difficult
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1

91. The cerebral cortex in humans is less crumbled than in other mammals.
Section: A Tour Through the Brain
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1

92. The occipital lobes contain the visual cortex, where visual signals are processed.
Section: A Tour Through the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1

93. The parietal lobes contain the auditory cortex, which processes sounds.
Section: A Tour Through the Brain
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1

94. The areas of the somatosensory cortex that receive signals from the hands and the face are disproportionately large.
Section: A Tour Through the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1

95. The parietal lobes are at the sides of the brain, just above the ears and behind the temples.
Section: A Tour Through the Brain
Type: Factual **Answer: False**
Level of Difficulty: Moderate
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1

96. An area of the left temporal lobe known as Wernicke's area is involved in language comprehension.
Section: A Tour Through the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1

97. The motor cortex is located in the frontal lobes.
Section: A Tour Through the Brain

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1

98. Broca's area, which is involved in speech production, is located in the parietal lobe.
Section: A Tour Through the Brain
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1

99. Many areas of the cortex, when stimulated, would produce no obvious response or sensation.
Section: A Tour Through the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1

100. If a surgeon applied electrical currents to a part of your brain and you felt nothing, it would indicate brain damage.
Section: A Tour Through the Brain
Type: Applied **Answer: False**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1

101. The prefrontal cortex accounts for approximately one-third of the entire cortex in human beings.
Section: A Tour Through the Brain
Type: Factual **Answer: True**
Level of Difficulty: Difficult
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1

102. Activity in the prefrontal lobes affect personality.
Section: A Tour Through the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1

103. The frontal lobes govern the ability to do a series of tasks in the proper sequence.
Section: A Tour Through the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1

104. The temporal lobes govern the ability to stop doing certain tasks at the proper time.
Section: A Tour Through the Brain
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1

105. People with damage in the left cerebral hemisphere may lose the ability to speak or understand language.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Section: The Two Hemispheres of the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres. APA 1.1

106. Patients with right hemisphere damage may have difficulty understanding music or art.
Section: The Two Hemispheres of the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres. APA 1.1

107. After split-brain surgery, patients are usually unable to walk or to care for the physical needs of everyday life.
Section: The Two Hemispheres of the Brain
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres. APA 1.1

108. Each brain hemisphere receives information from the eyes about the opposite side of the visual field.
Section: The Two Hemispheres of the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres. APA 1.1

109. One of the major roles of the right cerebral hemisphere is to continually provide a reasonable story to explain our thoughts, feelings, and behaviors.
Section: The Two Hemispheres of the Brain
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres. APA 1.1, 2.1

110. In most people, the right cerebral hemisphere of the brain is specialized for processing facial emotion.
Section: The Two Hemispheres of the Brain
Type: Factual **Answer: True**
Level of Difficulty: Moderate
LO 2.5.B Describe why the two hemispheres of the brain are allies rather than opposites. APA 1.1

111. In most people, the left cerebral hemisphere of the brain is specialized for reading.
Section: The Two Hemispheres of the Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.5.B Describe why the two hemispheres of the brain are allies rather than opposites. APA 1.1

112. The left hemisphere is specialized for processing the tone of voice in which the words are spoken.
Section: The Two Hemispheres of the Brain
Type: Factual **Answer: False**
Level of Difficulty: Difficult
LO 2.5.B Describe why the two hemispheres of the brain are allies rather than opposites. APA 1.1

113. During infancy, synapses proliferate at a slower rate than they do in adulthood.
Section: The Flexible Brain

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.6.A Define neural plasticity, and summarize some of the main evidence that the brain has the ability to change in response to new experiences. APA 1.1

114. The brain's ability to change and adapt in response to experience is called lateralization.
Section: The Flexible Brain
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.6.A Define neural plasticity, and summarize some of the main evidence that the brain has the ability to change in response to new experiences. APA 1.1

115. In blind people, the visual areas in the brain might be active during tasks requiring hearing or touch due to plasticity.
Section: The Flexible Brain
Type: Factual **Answer: True**
Level of Difficulty: Easy
LO 2.6.A Define neural plasticity, and summarize some of the main evidence that the brain has the ability to change in response to new experiences. APA 1.1

116. Illiterate individuals tend to have less white matter in a part of the parietal cortex when compared with literate people.
Section: The Flexible Brain
Type: Factual **Answer: True**
Level of Difficulty: Difficult
LO 2.6.B Discuss the relationship between cultural forces and brain function. APA 1.1

117. The patterns of brain activity during mathematical processing are different in native Chinese than in native English speakers.
Section: The Flexible Brain
Type: Factual **Answer: True**
Level of Difficulty: Moderate
LO 2.6.B Discuss the relationship between cultural forces and brain function. APA 1.1, 2.5

118. A study discussed in the textbook conclusively demonstrated that women are more talkative than men.
Section: The Flexible Brain
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior. APA 1.1, 2.5

119. Differences in the brain always account for the differences in people's behavior across situations.
Section: The Flexible Brain
Type: Factual **Answer: False**
Level of Difficulty: Easy
LO 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior. APA 1.1, 2.5

120. Sex differences in the brain could be the result rather than the cause of behavioral differences between men and women.
Section: The Flexible Brain
Type: Conceptual **Answer: True**
Level of Difficulty: Easy
LO 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior. APA 1.1, 2.5

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Short Answer Questions

1. Why do you immediately pull your hand away from something hot?
Section: The Nervous System: A Basic Blueprint
Type: Conceptual Level of Difficulty: Easy
LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. APA 1.1, 2.2
Answer: A good answer will include the following key points.
- **This is a spinal reflex.**
- **It is controlled by the spinal cord.**
- **Sensory input triggers a motor response.**

2. A brain without a peripheral nervous system would be like a radio without a receiver. Explain what is meant by this analogy.
Section: The Nervous System: A Basic Blueprint
Type: Conceptual Level of Difficulty: Moderate
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1, 2.1, 2.2
Answer: A good answer will include the following key points.
- **The peripheral nervous system picks up signals from sensory organs, just as a radio receiver picks up radio waves.**
- **Without a peripheral nervous system, the brain has no information to work with, just as a radio without a receiver plays only static.**

3. Why is the sympathetic nervous system compared to the accelerator of a car?
Section: The Nervous System: A Basic Blueprint
Type: Conceptual Level of Difficulty: Moderate
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1, 2.1
Answer: A good answer will include the following key points.
- **The sympathetic nervous system increases arousal like the accelerator increases speed of a car.**
- **The sympathetic nervous system shifts the body into "action mode," just as the accelerator causes a car to speed up.**

4. Why is the parasympathetic nervous system compared to the brake of a car?
Section: The Nervous System: A Basic Blueprint
Type: Conceptual Level of Difficulty: Moderate
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1, 2.1
Answer: A good answer will include the following key points.
- **The parasympathetic nervous system slows activity in the body like the brake slows a car.**
- **The parasympathetic nervous system conserves energy.**

5. List five different functions of glial cells.
Section: Communication in the Nervous System
Type: Factual Level of Difficulty: Easy
LO 2.2.A Compare the functions of neurons and glial cells. APA 1.1
Answer: A good answer will include the following key points.
- **Provide a scaffold for neurons.**
- **Provide neurons with nutrients.**
- **Insulate neurons.**
- **Protect brain from toxic agents.**
- **Remove cellular debris when neurons die.**
- **Communicate with each other and with neurons.**
- **Help determine which neural connections get stronger or weaker.**

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

6. List the three main parts of the neuron and explain the role each plays in the transmission of neural communication.
Section: Communication in the Nervous System
Type: Factual Level of Difficulty: Easy
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1
Answer: A good answer will include the following key points.
- **Dendrites—receive messages from other neurons and transmit them to cell body.**
- **Cell body—keeps the neuron alive and produces many important neurochemicals.**
- **Axon—transmits messages from the cell body to other neurons or to muscle or gland cells.**

7. When a neurotransmitter binds briefly with a receptor site, the ultimate effect is either excitatory or inhibitory. Explain the effects of each.
Section: Communication in the Nervous System
Type: Factual Level of Difficulty: Easy
LO 2.2.D Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1
Answer: A good answer will include the following key points.
- **Excitatory effect—a voltage shift in the positive direction occurs.**
- **It increases the probability that the receiving neuron will fire.**
- **Inhibitory effect—a voltage shift in the negative direction occurs.**
- **It decreases the probability that the receiving neuron will fire.**

8. Name any four neurotransmitters discussed in the textbook and explain what aspects of behavior, memory, and well-being each influences.
Section: Communication in the Nervous System
Type: Factual Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Answer: A good answer will include the following key points.
- **Serotonin—sleep, appetite, sensory perception, temperature regulation, pain suppression, mood.**
- **Dopamine—voluntary movement, learning, memory, emotion, pleasure or reward, and possibly response to novelty.**
- **Acetylcholine—muscle action, cognitive functioning, memory, emotion.**
- **Norepinephrine—increased heart rate, slowing of intestinal activity, learning, memory, dreaming, waking, emotion.**
- **GABA (gamma-aminobutyric acid)—the major inhibitory neurotransmitter in the brain.**
- **Glutamate—the major excitatory neurotransmitter in the brain.**

9. As she entered a health food store, Ginger noticed a sign recommending an herbal remedy called, "Saint-John's-wort" for the treatment of depression. Explain how this remedy affects the biochemistry of the nervous system.
Section: Communication in the Nervous System
Type: Applied Level of Difficulty: Easy
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1, 1.3, 2.2
Answer: A good answer will include the following key points.
- **Saint-John's-wort prevents cells that release serotonin from reabsorbing excess molecules in the synaptic cleft.**
- **As a result, levels of serotonin rise.**
- **Since low serotonin levels are associated with depression, this may help relieve depression.**

10. Name two hormones discussed in the textbook and explain some of the tasks that these hormones perform.
Section: Communication in the Nervous System
Type: Factual Level of Difficulty: Easy

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1
Answer: A good answer will include the following key points.
- **Melatonin—regulates daily biological rhythms, promotes sleep.**
- **Oxytocin—enhances uterine contractions during childbirth and facilitates the ejection of milk during nursing. Along with another hormone, vasopressin, oxytocin contributes to relationships in both sexes by promoting attachment and trust.**
- **Cortisol—increases blood sugar levels and boosts energy.**
- **Epinephrine (adrenalin) and norepinephrine (noradrenalin)—increase arousal levels, prepare a person for action, enhance memory.**
- **Testosterone—causes masculinizing effects on the body, influences sexual arousal in both sexes.**
- **Estrogen—causes feminizing effects on the body, regulates the menstrual cycle.**
- **Progesterone—contributes to the growth and maintenance of the uterine lining in preparation for a fertilized egg.**

11. Researchers are now studying the possible involvement of sex hormones in behavior not directly related to sex and reproduction. Cite one example of this research.
Section: Communication in the Nervous System
Type: Factual Level of Difficulty: Moderate
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1, 2.1, 2.5
Answer: A good answer will include the following key points.
- **The body's natural estrogen may contribute to learning and memory.**
- **Seems to promote the formation of synapses in some parts of the brain.**
- **Occurs in both males and females.**

12. A soldier whose best friend has been seriously injured in battle carries the wounded man to safety. After he reaches the medics, he realizes that he, too, is wounded. How could the soldier have carried his friend to safety without noticing the pain from his own wound?
Section: Communication in the Nervous System
Type: Applied Level of Difficulty: Moderate
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1, 1.3, 2.1
Answer: A good answer will include the following key points.
- **Stress causes endorphin levels to increase.**
- **Endorphins temporarily suppress the perception of pain.**

13. Name one drawback of the transcranial magnetic stimulation method discussed in the textbook.
Section: Mapping the Brain
Type: Conceptual Level of Difficulty: Moderate
LO 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results. APA 1.1, 2.2
Answer: A good answer will include the following key points.
- **When neurons fire, they cause many other neurons to become active, too.**
- **It is hard to tell which neurons are critical for a particular task.**

14. Your textbook describes an EEG recording as analogous to "listening to a game while standing outside a sports stadium." Explain this analogy.
Section: Mapping the Brain
Type: Conceptual Level of Difficulty: Moderate
LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1, 2.1
Answer: A good answer will include the following key points.
- **Each electrode reports the activity of many neurons.**
- **There is a lot of background noise.**

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

- **It is not very precise.**
- **Similarly, when standing outside a sports stadium, you know when something is happening, but you can't be sure what it is or who is doing it.**

15. How does an MRI allow the exploration of "inner space" without the injection of chemicals?
Section: Mapping the Brain
Type: Factual Level of Difficulty: Moderate
LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1, 2.2
Answer: A good answer will include the following key points.
- **Powerful magnetic fields produce vibrations in the nuclei of atoms making up the body.**
- **The vibrations are picked up as signals by special receivers.**
- **A computer analyzes the signals, their strength and duration, and converts them into a high-contrast picture of the brain (or other organ).**

16. What are the three structures of the brain stem described in your textbook? What function is associated with each structure?
Section: A Tour Through the Brain
Type: Factual Level of Difficulty: Easy
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1
Answer: A good answer will include the following key points.
- **Medulla—regulation of vital body functions such as respiration and heart rate.**
- **Pons—involved in sleeping, waking, and dreaming.**
- **Reticular activating system—screens incoming information and arouses higher brain areas.**

17. Which structure of the brain is about the size of a small fist and looks like a "little brain"? What function is associated with this "lesser brain"?
Section: A Tour Through the Brain
Type: Factual Level of Difficulty: Easy
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. APA 1.1
Answer: A good answer will include the following key points.
- **The cerebellum is behind the brain stem.**
- **Contributes to a sense of balance and coordination of movement.**
- **Also involved in remembering simple skills and acquired reflexes.**
- **May be involved in complex cognitive tasks such as analyzing sensory information, solving problems, and understanding words.**

18. Which is the only sense that completely bypasses the thalamus? How is memory related to this particular sense?
Section: A Tour Through the Brain
Type: Factual Level of Difficulty: Easy
LO 2.4.B Describe the structure, function, and location of the thalamus. APA 1.1, 2.1
Answer: A good answer will include the following key points.
- **Olfactory (smell) information bypasses the thalamus.**
- **The olfactory bulb is directly connected to areas involved with emotion.**
- **Odors become associated with memories of important personal experiences.**

19. Describe three tasks of the amygdala.
Section: A Tour Through the Brain
Type: Factual Level of Difficulty: Moderate
LO 2.4.D Describe the structure, function, and location of the amygdala. APA 1.1
Answer: A good answer will include the following key points.
- **Evaluating sensory information, determining its significance, and deciding to approach or**

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

withdraw.
- **Mediating anxiety and depression.**
- **Role in emotional memory.**

20. Explain the relationship of the hippocampus and memory. What research has been done regarding the hippocampus and memory?
Section: A Tour Through the Brain
Type: Conceptual Level of Difficulty: Easy
LO 2.4.E Describe the structure, function, and location of the hippocampus. APA 1.1, 2.1
Answer: A good answer will include the following key points.
- **It enables us to take in and combine different components of experiences—sights, sounds, and feelings—and bind them together into one "memory," although the individual components may ultimately be stored in various parts of the cerebral cortex involved in formation of new memories about facts and events.**
- **Research on brain-damaged patients with severe memory problems supports these conclusions.**
- **Case study of H.M. also supports these conclusions.**

21. Why does the human brain have so many crevices and wrinkles in the cerebral cortex?
Section: A Tour Through the Brain
Type: Conceptual Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex.
APA 1.1
Answer: A good answer will include the following key points.
- **The deep crevices and wrinkles enable it to contain its billions of neurons in a compact space.**
- **In other mammals, which have fewer neurons, the cortex is less crumpled.**

22. What is the difference between "gray matter" and "white matter" in the brain?
Section: A Tour Through the Brain
Type: Factual Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1
Answer: A good answer will include the following key points.
- **Gray matter—densely-packed cell bodies of neurons.**
- **White matter—myelin-covered axons.**
- **Myelin is whitish in color.**

23. On each cerebral hemisphere, deep fissures divide the cortex into four distinct lobes. Name each of the four lobes and describe the location of each lobe.
Section: A Tour Through the Brain
Type: Factual Level of Difficulty: Easy
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1
Answer: A good answer will include the following key points.
- **Occipital lobes—back of the brain.**
- **Frontal lobes—front of the brain (forehead area).**
- **Parietal lobes—top of the brain.**
- **Temporal lobes—sides of the brain (just above ears).**

24. Describe the accident involving Phineas Gage and the resulting impact it had on him.
Section: A Tour Through the Brain
Type: Factual Level of Difficulty: Moderate
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1, 1.2, 2.2
Answer: A good answer will include the following key points.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

- **In 1848, a bizarre accident drove an inch-thick, three-and-a-half-foot-long iron rod clear through the head of Phineas Gage.**
- **The rod entered beneath the left eye and exited through the top of the head, destroying much of his prefrontal cortex.**
- **Miraculously, Gage survived the trauma and, by most accounts, he retained the ability to speak, think, and remember.**
- **However, Gage had changed from mild-mannered, friendly and efficient into foul-mouthed, ill-tempered, and undependable.**
- **After the accident, Gage was unable to hold a steady job or stick to a plan**

25. Ronald Myers and Roger Sperry wondered what would happen if the two hemispheres of the brain were cut off from one another. In order to explore their research question, they severed the corpus callosum in cats. Describe the aspects of the cats' behaviors that remained normal and the aspects that showed a profound change.
Section: The Two Hemispheres of the Brain
Type: Factual Level of Difficulty: Moderate
LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres.
APA 1.1, 1.2
Answer: A good answer will include the following key points.
- **The cats' everyday behaviors seemed normal.**
- **If trained in a task with one eye blindfolded, they could not do the task when the blindfold was shifted to the other eye.**

26. Explain the experimental procedure used when split-brain patients were shown composite photographs. Why did the patients claim to notice nothing unusual about the original photographs?
Section: The Two Hemispheres of the Brain
Type: Factual Level of Difficulty: Difficult
LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres. APA 1.1, 2.1
Answer: A good answer will include the following key points.
- **Photographs of faces were cut in half and made into composite pictures combining halves of two different faces.**
- **Patients were instructed to stare at a dot in the middle of a screen.**
- **The composite pictures were flashed briefly on the screen.**
- **Patients would report only the person shown in the right half of the picture.**
- **The left hemisphere, which could talk, only saw the right half of the picture, so nothing seemed unusual.**

27. Describe three activities that are more closely associated with the left hemisphere and three activities that are more closely associated with the right hemisphere of the brain.
Section: The Two Hemispheres of the Brain
Type: Factual Level of Difficulty: Difficult
LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres. APA 1.1
Answer: A good answer will include the following key points.
- **Left hemisphere—language; logical, symbolic, and sequential tasks; understanding technical material.**
- **Right hemisphere—spatial-visual ability; facial recognition, the ability to read facial expressions; creation and appreciation of art and music.**

28. How does plasticity help blind people?
Section: The Flexible Brain
Type: Conceptual Level of Difficulty: Easy

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

LO 2.6.A Define neural plasticity, and summarize some of the main evidence that the brain has the ability to change in response to new experiences. APA 1.1, 1.3, 2.1
Answer: A good answer will include the following key points.

- **The brain's ability to change in response to new experiences is called plasticity.**
- **In blind people, new connections may form, permitting lasting structural changes.**
- **The visual areas of the brain may become active during tasks requiring hearing or touch.**

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Essay Questions

1. Describe in detail the two main parts of the nervous system.
Section: The Nervous System: A Basic Blueprint
Type: Factual Level of Difficulty: Easy
LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1
Answer: A good answer will include the following key points.
- **The two divisions of the nervous system are the central nervous system and the peripheral nervous system.**
- **The central nervous system consists of the brain and spinal cord.**
- **The peripheral nervous system consists of the autonomic nervous system and the somatic nervous system.**
- **The autonomic nervous system consists of the sympathetic and parasympathetic divisions.**
- **The somatic nervous system consists of sensory and motor nerves.**

2. The autonomic nervous system is divided into two parts that work together but in opposing ways. Describe the functions of each part in detail, and create an example which illustrates the activation of one part and then the other.
Section: The Nervous System: A Basic Blueprint
Type: Factual Level of Difficulty: Easy
LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. APA 1.1, 2.1, 2.2
Answer: A good answer will include the following key points.
- **The two divisions are the sympathetic and the parasympathetic divisions.**
- **The sympathetic division increases arousal and uses energy.**
- **The parasympathetic division slows the body and stores and conserves energy.**
- **Example: A stressful situation, such as giving a speech, causes increased sympathetic activity and arousal. When the speech is over, the parasympathetic division slows body functions to normal.**

3. Many axons, especially the larger ones, are insulated with a myelin sheath. Write an essay on the importance of the myelin sheath, making sure to incorporate the following information:
- What kind of cells make up the myelin sheath?
- What does the myelin sheath look like?
- What are two purposes of the myelin sheath?
- What happens when a person experiences the loss of myelin?

Section: Communication in the Nervous System
Type: Factual Level of Difficulty: Easy
LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. APA 1.1, 2.1
Answer: A good answer will include the following key points.
- **Myelin is a fatty sheath formed by glial cells.**
- **It occurs in segments along the axon and looks like a string of link sausages.**
- **Its key functions are to prevent signals in adjacent cells from interfering with each other and to speed up conduction of neural impulses.**
- **In individuals with multiple sclerosis, loss of myelin causes erratic nerve signals resulting in things like loss of sensation, muscle weakness or paralysis, lack of coordination, or vision problems.**

4. For years, the conventional assumption in neuroscience had been that neurons in the central nervous system could neither reproduce nor regenerate, but research has proved otherwise. Explain the startling results of studies that have overthrown the conventional wisdom regarding neuronal regeneration.
Section: Communication in the Nervous System
Type: Conceptual Level of Difficulty: Easy
LO 2.2.C Explain how stem cells contribute to the process of neurogenesis. APA 1.1, 2.1, 2.2

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Answer: A good answer will include the following key points.

- **In animal studies, severed axons in the spinal cord can regrow when treated with certain nervous-system chemicals.**
- **Stem cells in a growth medium in vitro will produce new neurons that continue to divide and multiply.**
- **Neurogenesis, the production of new neurons, appears to continue in the human brain into adulthood.**
- **Physical exercise and mental activity can promote this process while stress may inhibit it.**

5. Describe the electrical and chemical communication within and between neurons.
Section: Communication in the Nervous System
Type: Factual Level of Difficulty: Difficult
LO 2.2.D Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. APA 1.1
Answer: A good answer will include the following key points.

- **Action potential—an electrical impulse in the axon of a neuron.**
- **It is caused by a brief inflow of sodium ions followed by a brief outflow of potassium ions.**
- **It is conducted down the axon from the cell body to the axon terminal.**
- **Action potential causes the release of chemical neurotransmitter from the axon terminal.**
- **The neurotransmitter travels across the synaptic gap and binds to receptor sites on the receiving neuron.**
- **The neurotransmitter can cause either an excitatory effect (positive voltage change) or an inhibitory effect (negative voltage change) in the receiving neuron's membrane.**

6. Endorphin levels can shoot up when an animal or a person is afraid or under stress. Explain why this is adaptive through the development of your own example.
Section: Communication in the Nervous System
Type: Conceptual Level of Difficulty: Moderate
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. APA 1.1, 2.1

- **Endorphins suppress perception of pain and increase pleasure.**
- **When an animal is threatened, it often must act quickly to survive.**
- **Pain can interfere with action.**
- **Example should describe a situation where responding to pain would put a person in a dangerous situation.**

7. How can scientists study the living brain if it is protected by the skull? The textbook notes several methods for this type of study. Describe the different techniques that have been used to explore the workings of the brain.
Section: Mapping the Brain
Type: Factual Level of Difficulty: Moderate
LO 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results. LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. APA 1.1, 2.1, 2.2, 2.4
Answer: A good answer will include the following key points.

- **Electroencephalogram (EEG)—recording brain waves through electrodes attached to the scalp.**
- **Event-related potentials (ERP)—a technique that isolates the neural activity associated with a specific stimulus or event.**
- **Transcranial magnetic stimulation (TMS)—a method of stimulating brain cells, using a powerful magnetic field produced by a wire coil placed on a person's head; it can be used by researchers to temporarily inactivate neural circuits**
- **Transcranial direct current stimulation (tDCS)—a technique that applies a very small electric current to stimulate or suppress activity in parts of the cortex; it enables researchers to identify the functions of a particular area.**
- **Positron-emission tomography (PET scan)—records biochemical changes in the brain, often**

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

after injection of radioactively-labeled glucose allowing researcher to "see" which areas of the brain are most active.

- **Magnetic resonance imaging (MRI)—using powerful magnetic fields to produce vibration in the nuclei of atoms, then recording the vibrations and converting them into a high-contrast image of the brain.**
- **Functional MRI (fMRI)—an ultrafast MRI allowing visualization of second-to-second changes in the brain. In fMRI, the receivers detect levels of blood oxygen in different brain areas. Because neurons use oxygen as fuel, active brain areas produce a bigger signal.**

8. Your best friends from college invite you over for pizza and a friendly game of cards. Name six parts of the brain and explain the role each plays during your evening of food, fellowship, and playing cards.
Section: A Tour Through the Brain
Type: Applied Level of Difficulty: Moderate
LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. LO 2.4.B Describe the structure, function, and location of the thalamus. LO 2.4.C Describe the structure, function, and location of the hypothalamus and pituitary gland. LO 2.4.E Describe the structure, function, and location of the hippocampus. LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1, 2.1, 2.2
Answer: A good answer will include the following key points.
- **Medulla—keeps your heart beating and keeps you breathing.**
- **Reticular activating system—keeps you awake.**
- **Frontal lobe—helps you make decisions during the card game.**
- **Hypothalamus—lets you know when you are hungry and when you are full.**
- **Cerebellum—helps you maintain your balance and move about in a coordinated way.**
- **Thalamus—sends sensory information to the appropriate areas of cortex for analysis.**
- **Hippocampus—helps you form new memories of the evening.**
- **Broca's area in frontal lobe—allows you to speak to your friends.**
- **Wernicke's area in temporal lobe—allows you to understand when your friends speak to you.**
- **Visual cortex in occipital lobe—allows you to see your cards, your friends, and the rest of your surroundings.**

9. What are the names and roles of the four lobes of the cerebral cortex?
Section: A Tour Through the Brain
Type: Factual Level of Difficulty: Moderate
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1
Answer: A good answer will include the following key points.
- **Frontal lobes—sending commands to skeletal muscles, short-term memory, emotion, making plans, thinking creatively, taking initiative, speech.**
- **Occipital lobes—visual processing.**
- **Parietal lobes—processing touch information, attention, various mental operations.**
- **Temporal lobes—processing auditory information, memory, perception, emotion, language comprehension.**

10. In 1848, an explosion near railroad-worker Phineas Gage sent a 3½-foot iron rod through his skull. The iron rod entered his head under the left eye and emerged from the top of Phineas' head. What conclusion do many modern neuroscientists draw from case study?
Section: A Tour Through the Brain
Type: Factual Level of Difficulty: Moderate
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. APA 1.1, 2.1, 2.4
Answer: A good answer will include the following key points.
- **Gage was described by his friends as "no longer Gage."**

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

- **Gage became foul-mouthed, ill-tempered, and undependable.**
- **The frontal lobes are involved in personality.**
- **Parts of the frontal lobes are involved in social judgment, rational decision making, and the ability to set goals and to make and carry out plans.**

11. Suppose you come across an article on a news website. According to the article, a new study has found anatomical differences between the male and female brain that explain why men and women "don't see eye-to-eye on so many topics." What are some reasons why you should be skeptical of this type of claim?
Section: The Flexible Brain
Type: Factual Level of Difficulty: Moderate
LO 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior. APA 1.1, 2.1, 2.4, 2.5
Answer: A good answer will include the following key points.
- **Many supposed gender differences in behavior actually reflect stereotypes about males and females.**
- **The overlap between the sexes is greater than the differences between them.**
- **A brain difference does not necessarily explain behavior or performance.**
- **Differences in the brain do not account for differences in behavior across different situations.**
- **Sex differences in the brain could be the result, rather than the cause, of behavioral differences.**
- **These types of results often cannot be replicated.**

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Integrative Essay Questions: Linking the Chapters

1. Abnormally low levels of serotonin and dopamine have been associated with harmful effects. Explain these effects and describe what psychologists know about this relationship using your knowledge of correlational studies. What might be an easy assumption to make that may not necessarily be accurate?
Chapter 1
Section: Correlational Studies: Looking For Relationships
LO 1.4.B Explain why a correlation between two variables does not establish a causal relationship between those variables.
Chapter 2
Section: Communication in the Nervous System
LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior.
APA 1.1, 2.1, 2.2, 2.4
Type: Conceptual
Level of Difficulty: Moderate
Answer: A good answer will include the following key points.
- **Low levels of serotonin are associated with severe depression.**
- **Low levels of dopamine are associated with Parkinson's disease.**
- **This information usually results from correlational studies and from drug treatment.**
- **Correlation does not imply causation.**
- **The low levels of neurotransmitters could cause the disorder, could result from the disorder, or could be related to something else entirely.**
- **Just because a drug that boosts levels of a neurotransmitter is effective in treating a disorder does not mean that low levels of the neurotransmitter caused the disorder.**

2. What can be learned by studying patients who have had a part of the brain damaged because of disease or injury? What can be learned by studying individuals whose disorders have required surgical lesions? What are the drawbacks of the case study method? Include in your essay an evaluation of the case studies of Phineas Gage and split-brain patients.
Chapter 1
Section: Descriptive Studies: Establishing the Facts
LO 1.3.B Discuss the advantages and disadvantages of using different descriptive methods such as case studies, observational methods, tests, and surveys.
Chapter 2
Section: The Two Hemispheres of the Brain
LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres.
APA 1.1, 2.2, 2.4
Type: Factual
Level of Difficulty: Difficult
Answer: A good answer will include the following key points.
- **Case studies of individuals with brain damage from disease, injury, or surgery can lead to hypotheses about brain-behavior relationships.**
- **A drawback is that information gained from individual case studies may not generalize to other cases.**
- **In such cases, the area of the brain that is damaged varies with each individual, so no two cases are exactly alike.**
- **Phineas Gage—results are problematic because there is controversy about the details of the case.**
- **Split-brain patients have been carefully studied before and after surgery. There are multiple cases, so comparisons can be made between people. Because of their epilepsy, however, their brains may not have been functioning as that of a normal person before the surgery.**

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Revel Assessments

End of Module Quizzes

Key: Answer, Type, Learning Objective, Level

Type
A=Applied
C=Conceptual
F=Factual
Level
(1)=Easy; (2)=Moderate; (3)=Difficult

LO=Learning Objective

Quiz: The Nervous System: A Basic Blueprint

EOM Q2.1.1
The central nervous system is composed of the _____.

a) brain and spinal cord
b) somatic system and autonomic system
Consider This: The sympathetic and parasympathetic systems make up the autonomic nervous system. 2.1.A Describe the primary functions of the central nervous system, and name its two main structures.
c) sympathetic system and parasympathetic system
Consider This: The sympathetic and parasympathetic systems make up the autonomic nervous system. 2.1.A Describe the primary functions of the central nervous system, and name its two main structures.
d) peripheral system and lateral system
Consider This: The sympathetic and parasympathetic systems make up the autonomic nervous system. 2.1.A Describe the primary functions of the central nervous system, and name its two main structures.

Topic: The Nervous System: A Basic Blueprint
ANS: a, Factual. LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. (1)

EOM Q2.1.2
Jimmy is camping with friends when he accidentally steps in the campfire and recoils his foot instantaneously. What produced this speedy foot-saving action?

a) the direct operation of the spinal cord
b) a pain signal sent from the brain to the foot
Consider This: Some parts of the central nervous system are activated with virtually no conscious effort. 2.1.A Describe the primary functions of the central nervous system, and name its two main structures.
c) a signal relayed from the foot to the brain to the spinal cord back to the foot
Consider This: Some parts of the central nervous system are activated with virtually no conscious effort. 2.1.A Describe the primary functions of the central nervous system, and name its two main structures.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

d) the complex interplay of brain and spinal signals
Consider This: Some parts of the central nervous system are activated with virtually no conscious effort. 2.1.A Describe the primary functions of the central nervous system, and name its two main structures.

Topic: The Nervous System: A Basic Blueprint
ANS: a, Applied. LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. (3)

EOM Q2.1.3
Nerves that are connected to sensory receptors and to skeletal muscles are part of the _____ nervous system.
a) somatic
b) central
Consider This: The sympathetic and parasympathetic systems make up the autonomic nervous system. 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions.
c) sympathetic
Consider This: The sympathetic and parasympathetic systems make up the autonomic nervous system. 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions.
d) parasympathetic
Consider This: The sympathetic and parasympathetic systems make up the autonomic nervous system. 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions.

Topic: The Nervous System: A Basic Blueprint
ANS: a, Factual. LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. (2)

EOM Q2.1.4
As Keiko walked through a dark alley late at night, she heard a bottle break, a weird wheezing noise, and something rustling behind a dumpster. Her heart beat faster, she started to sweat, and she began to breathe more deeply. These physiological reactions were produced by Keiko's _____ nervous system.
a) sympathetic
b) parasympathetic
Consider This: Keiko's body was readying itself to either confront an environmental stressor or flee the scene. 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions.
c) somatic
Consider This: Keiko's body was readying itself to either confront an environmental stressor or flee the scene. 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions.
d) central
Consider This: Keiko's body was readying itself to either confront an environmental stressor or flee the scene. 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions.

Topic: The Nervous System: A Basic Blueprint
ANS: a, Applied. LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. (3)

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

EOM Q2.1.5
As Keiko continued down the alley she saw a mangy, asthmatic cat emerge from behind a dumpster. The cat yawned and hobbled away, as Keiko's heartbeat slowed and her breathing returned to normal. These physiological reactions were produced by Keiko's _____ nervous system.

a) parasympathetic
b) sympathetic
Consider This: Keiko's body was returning itself to normal conditions after preparing to fight or flee.
2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions.
c) central
Consider This: Keiko's body was returning itself to normal conditions after preparing to fight or flee.
2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions.
d) somatic
Consider This: Keiko's body was returning itself to normal conditions after preparing to fight or flee.
2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions.

Topic: The Nervous System: A Basic Blueprint
ANS: a, Applied. LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. (3)

Quiz: Communication in the Nervous System

EOM Q2.2.1
Nerve cells found in the brain are called _____, whereas support cells found in the brain are called _____.

a) neurons; glia
b) nerve cells; dendrites
Consider This: Your brain is made up of two types of cells with specific names and specific functions. 2.2.A Compare the functions of neurons and glial cells.
c) glia; axons
Consider This: Your brain is made up of two types of cells with specific names and specific functions. 2.2.A Compare the functions of neurons and glial cells.
d) glia; neurons
Consider This: Your brain is made up of two types of cells with specific names and specific functions. 2.2.A Compare the functions of neurons and glial cells.

Topic: Communication in the Nervous System
ANS: a, Factual. LO 2.2.A Compare the functions of neurons and glial cells. (3)

EOM Q2.2.2
In a typical neuron, information is received by _____ and transmitted to the next neuron by _____.

a) dendrites; an axon
b) axons; glia
Consider This: Neurons act as a kind of relay station, taking in information on one end and transmitting it out the other end. Picture what a typical neuron looks like and what those receiving and transmitting elements are called. 2.2.B Describe each of the three main parts of a neuron, and explain their functions.
c) dendrites; glia
Consider This: Neurons act as a kind of relay station, taking in information on one end and transmitting it out the other end. Picture what a typical neuron looks like and what those receiving

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

and transmitting elements are called. 2.2.B Describe each of the three main parts of a neuron, and explain their functions.
d) an axon; dendrites
Consider This: Neurons act as a kind of relay station, taking in information on one end and transmitting it out the other end. Picture what a typical neuron looks like and what those receiving and transmitting elements are called. 2.2.B Describe each of the three main parts of a neuron, and explain their functions.

Topic: Communication in the Nervous System
ANS: a, Conceptual. LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. (2)

EOM Q2.2.3
Embryonic stem cells _____.
a) can generate many types of specialist cells, such as neurons or muscle cells
b) can repair themselves without sending pain signals to the spinal cord
Consider This: Stem cell research holds a great deal of promise, in large part due to the ability of embryonic cells to develop in many different ways. 2.2.C Explain how stem cells contribute to the process of neurogenesis.
c) can divide four times, as opposed to most cells, which only divide twice
Consider This: Stem cell research holds a great deal of promise, in large part due to the ability of embryonic cells to develop in many different ways. 2.2.C Explain how stem cells contribute to the process of neurogenesis.
d) always turn into neurons after a 1-year incubation period
Consider This: Stem cell research holds a great deal of promise, in large part due to the ability of embryonic cells to develop in many different ways. 2.2.C Explain how stem cells contribute to the process of neurogenesis.

Topic: Communication in the Nervous System
ANS: a, Conceptual. LO 2.2.C Explain how stem cells contribute to the process of neurogenesis. (2)

EOM Q2.2.4
Anuj was bragging to C. J. "Man, I'm smart!" he crowed. "My brain cells are stitched so tightly together that there's no space between them. Information travels from neuron to neuron without a break!" "You can't be that smart," muttered C. J., "if you don't even understand how misinformed you are." Why is C. J. correct?
a) Neurons do not touch one another; there is a small gap between them called a synaptic cleft.
b) Glial cells are responsible for transmitting information throughout the brain.
Consider This: Neurons communicate using an electrochemical messaging system; the "chemical" part is what is important in the present case. 2.2.D Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters.
c) Axons touch other axons, and dendrites touch other dendrites; the neuron itself does not matter.
Consider This: Neurons communicate using an electrochemical messaging system; the "chemical" part is what is important in the present case. 2.2.D Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters.
d) Myelin stimulates an action potential, and this sends a signal out through a dendrite; the strength of the signal is more important than the connection.
Consider This: Neurons communicate using an electrochemical messaging system; the "chemical" part is what is important in the present case. 2.2.D Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Topic: Communication in the Nervous System
ANS: a, Applied. LO 2.2.D Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. (3)

EOM Q2.2.5
_____ is a neurotransmitter involved in voluntary movement, pleasure and reward, and attention.

a) Dopamine
b) GABA
Consider This: Serotonin affects neurons involved in sleep, appetite, sensory perception, temperature regulation, pain suppression, and mood. 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior.
c) Serotonin
Consider This: Serotonin affects neurons involved in sleep, appetite, sensory perception, temperature regulation, pain suppression, and mood. 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior.
d) Acetylcholine
Consider This: Serotonin affects neurons involved in sleep, appetite, sensory perception, temperature regulation, pain suppression, and mood. 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior.

Topic: Communication in the Nervous System
ANS: a, Applied. LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. (1)

Quiz: Mapping the Brain

EOM Q2.3.1
Surgically removing brain structures from an animal to understand the effects on behavior is a technique for investigating brain function known as _____.

a) the lesion method
b) PET scanning
Consider This: One method for understanding brain function is to study what happens when parts of the brain are damaged, missing, or otherwise impaired. The technique described here involves direct intervention in the brain. 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results.
c) transcranial magnetic stimulation
Consider This: One method for understanding brain function is to study what happens when parts of the brain are damaged, missing, or otherwise impaired. The technique described here involves direct intervention in the brain. 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results.
d) positron emission tomography
Consider This: One method for understanding brain function is to study what happens when parts of the brain are damaged, missing, or otherwise impaired. The technique described here involves direct intervention in the brain. 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results.

Topic: Mapping the Brain
ANS: a, Factual. LO 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results. (1)

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

EOM Q2.3.2
Although both techniques involve intervening in brain function, _____ employs a large electrical current that generates a magnetic field, whereas _____ uses a relatively small electrical current.

a) TMS; tDCS
b) EEG; ERP
Consider This: There are many methods available to researchers for mapping the brain. Recall which techniques involve applying electromagnetic forces to the brain. 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results.
c) tDCS; PET
Consider This: There are many methods available to researchers for mapping the brain. Recall which techniques involve applying electromagnetic forces to the brain. 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results.
d) MRI; TMS
Consider This: There are many methods available to researchers for mapping the brain. Recall which techniques involve applying electromagnetic forces to the brain. 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results.

Topic: Mapping the Brain
ANS: a, Conceptual. LO 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results. (2)

EOM Q2.3.3
When recording brain waves, both _____ and _____ can provide a general record of electrical brain activity.

a) EEG; ERP
b) PET; MRI
Consider This: There are many techniques for recording brain activity; which ones rely on measuring electrical activity? 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain.
c) TMS; tDCS
Consider This: There are many techniques for recording brain activity; which ones rely on measuring electrical activity? 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain.
d) EOM; EOC
Consider This: There are many techniques for recording brain activity; which ones rely on measuring electrical activity? 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain.

Topic: Mapping the Brain
ANS: a, Conceptual. LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. (2)

EOM Q2.3.4
The brain's use of glucose can be recorded using _____.

a) PET scans
b) EEG
Consider This: There are many techniques for recording brain activity; which one relies on measuring biochemical changes in the brain as they occur? 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain.
c) ERP
Consider This: There are many techniques for recording brain activity; which one relies on measuring biochemical changes in the brain as they occur? 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain.
d) TMS

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Consider This: There are many techniques for recording brain activity; which one relies on measuring biochemical changes in the brain as they occur? 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain.

Topic: Mapping the Brain
ANS: a, Conceptual. LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. (2)

EOM Q2.3.5
Pierre and Solange were talking one day. "I'm a little nervous," confessed Pierre. "My doctor told me I should get a brain scan…M-R-something." "Oh!" Solange replied. "MRI, or fMRI?" "Hmmm, I'm not sure," replied Pierre. "What's the difference?" Can you answer Pierre's question?

a) MRI records the structure of the brain, whereas fMRI records brain activity associated with specific thoughts or behaviors.
b) MRI uses a pulsating electromagnetic current to stimulate the brain, whereas fMRI uses a low-voltage current.
Consider This: Both MRI and fMRI rely on the same foundation for their operation. 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain.
c) MRI records changes in blood glucose levels, whereas fMRI records generalized electrical activity.
Consider This: Both MRI and fMRI rely on the same foundation for their operation. 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain.
d) MRI is an intervention technique, whereas fMRI is simply a recording technique.
Consider This: Both MRI and fMRI rely on the same foundation for their operation. 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain.

Topic: Mapping the Brain
ANS: a, Analyze. LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. (3)

Quiz: A Tour Through the Brain

EOM Q2.4.1
Which of the following is not a main structure found in the brain stem?

a) hypothalamus
b) medulla
Consider This: Picture where the brain stem is located in the brain, and try to recall the structures that are found there. 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum.
c) reticular activating system
Consider This: Picture where the brain stem is located in the brain, and try to recall the structures that are found there. 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum.
d) pons
Consider This: Picture where the brain stem is located in the brain, and try to recall the structures that are found there. 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum.

Topic: A Tour Through the Brain
ANS: a, Factual. LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. (1)

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

EOM Q2.4.2
Which brain structure acts as a sensory relay station, directing visual or auditory sensations to other parts of the brain?

a) thalamus
b) hippocampus
Consider This: The brain structure described here is located deep within the brain's interior. 2.4.B Describe the structure, function, and location of the thalamus.
c) pons
Consider This: The brain structure described here is located deep within the brain's interior. 2.4.B Describe the structure, function, and location of the thalamus.
d) corpus callosum
Consider This: The brain structure described here is located deep within the brain's interior. 2.4.B Describe the structure, function, and location of the thalamus.

Topic: A Tour Through the Brain
ANS: a, Conceptual. LO 2.4.B Describe the structure, function, and location of the thalamus. (2)

EOM Q2.4.3
If you had severe difficulty forming memories, what part of your brain might be damaged?

a) hippocampus
b) hypothalamus
Consider This: Most structures in the brain contribute to multiple processes, but one structure in particular plays an important role in memory; what is that structure? 2.4.E Describe the structure, function, and location of the hippocampus.
c) cerebellum
Consider This: Most structures in the brain contribute to multiple processes, but one structure in particular plays an important role in memory; what is that structure? 2.4.E Describe the structure, function, and location of the hippocampus.
d) pons
Consider This: Most structures in the brain contribute to multiple processes, but one structure in particular plays an important role in memory; what is that structure? 2.4.E Describe the structure, function, and location of the hippocampus.

Topic: A Tour Through the Brain
ANS: a, Conceptual. LO 2.4.E Describe the structure, function, and location of the hippocampus. (2)

EOM Q2.4.4
The thick band of fibers that connects the two hemispheres of the brain is called the _____.

a) corpus callosum
b) cerebral cortex
Consider This: The structure described here allows information to pass from one hemisphere to the other. 2.4.F Describe the structure of the cerebrum, and explain the function of the corpus callosum.
c) thalamic extension
Consider This: The structure described here allows information to pass from one hemisphere to the other. 2.4.F Describe the structure of the cerebrum, and explain the function of the corpus callosum.
d) basal ganglia
Consider This: The structure described here allows information to pass from one hemisphere to the other. 2.4.F Describe the structure of the cerebrum, and explain the function of the corpus callosum.

Topic: A Tour Through the Brain
ANS: a, Factual. LO 2.4.F Describe the structure of the cerebrum, and explain the function of the corpus callosum. (1)

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

EOM Q2.4.5
The visual cortex is located in the _____ lobe.

a) occipital
b) parietal
Consider This: The four lobes of each hemisphere contain areas specialized for different functions. Where are the areas related to vision located? 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex.
c) frontal
Consider This: The four lobes of each hemisphere contain areas specialized for different functions. Where are the areas related to vision located? 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex.
d) temporal
Consider This: The four lobes of each hemisphere contain areas specialized for different functions. Where are the areas related to vision located? 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex.

Topic: A Tour Through the Brain
ANS: a, Factual. LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. (1)

Quiz: The Two Hemispheres of the Brain

EOM Q2.5.1
Imagine that an image of a cat was received by a split-brain patient's left hemisphere, and an image of a dog was received by that same patient's right hemisphere. If prompted for a verbal response, what would the patient say?

a) "I saw a cat."
b) "I saw a dog."
Consider This: Think about the typical setup of a split-brain experiment, and also think about what brain structure gets split when this operation takes place. 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres.
c) "I saw a cat and a dog."
Consider This: Think about the typical setup of a split-brain experiment, and also think about what brain structure gets split when this operation takes place. 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres.
d) The patient would be unable to verbalize anything.
Consider This: Think about the typical setup of a split-brain experiment, and also think about what brain structure gets split when this operation takes place. 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres.

Topic: The Two Hemispheres of the Brain
ANS: a, Factual. LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres. (3)

EOM Q2.5.2
Imagine that an image of a cat was received by a split-brain patient's left hemisphere, and an image of a dog was received by that same patient's right hemisphere. If the patient were prompted to point at an image using her or his left hand, what image would that be?

a) the dog
b) the cat

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Consider This: Remember, when you look straight ahead, everything in the left side of your visual field goes to the right half of your brain. 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres.
c) The patient would be equally likely to point to either the dog or the cat.
Consider This: Remember, when you look straight ahead, everything in the left side of your visual field goes to the right half of your brain. 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres.
d) The patient would be unable to point at anything.
Consider This: Remember, when you look straight ahead, everything in the left side of your visual field goes to the right half of your brain. 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres.

Topic: The Two Hemispheres of the Brain
ANS: a, Applied. LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres. (3)

EOM Q2.5.3
Imagine that an image of a cat was received by a split-brain patient's left hemisphere, and an image of a dog was received by that same patient's right hemisphere. If the patient were prompted to point at an image using her or his right hand, what image would that be?

a) the cat
b) the dog
Consider This: Remember, when you look straight ahead, everything in the left side of your visual field goes to the right half of your brain. 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres.
c) The patient would be equally likely to point to either the dog or the cat.
Consider This: Remember, when you look straight ahead, everything in the left side of your visual field goes to the right half of your brain. 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres.
d) The patient would be unable to point at anything.
Consider This: Remember, when you look straight ahead, everything in the left side of your visual field goes to the right half of your brain. 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres.

Topic: The Two Hemispheres of the Brain
ANS: a, Applied. LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres. (3)

EOM Q2.5.4
If words were presented to one cerebral hemisphere or the other, which hemisphere would be more likely to show an advantage in reading the words faster?

a) the left hemisphere
b) the right hemisphere
Consider This: The two cerebral hemispheres show strengths or specializations for different kinds of information-processing tasks. 2.5.B Describe why the two hemispheres of the brain are allies rather than opposites.
c) There should be no difference between the reading speeds of the two hemispheres.
Consider This: The two cerebral hemispheres show strengths or specializations for different kinds of information-processing tasks. 2.5.B Describe why the two hemispheres of the brain are allies rather than opposites.
d) the left hemisphere for short words; the right hemisphere for longer words

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Consider This: The two cerebral hemispheres show strengths or specializations for different kinds of information-processing tasks. 2.5.B Describe why the two hemispheres of the brain are allies rather than opposites.

Topic: The Two Hemispheres of the Brain
ANS: a, Applied. LO 2.5.B Describe why the two hemispheres of the brain are allies rather than opposites. (3)

EOM Q2.5.5
What is the most reasonable conclusion to reach about the operation of the cerebral hemispheres, based on all we know from the available research?

a) The two cerebral hemispheres are cooperative partners, each contributing to tasks that benefit the owner of that brain.
b) Some people are "left-brained" whereas others are "right-brained," and determining which is which can make life a lot easier for an individual.
Consider This: Although the human brain has many identifiable structures, there is a reason why we talk about "the brain" rather than "the collection of separate squishy structures housed in your skull." 2.5.B Describe why the two hemispheres of the brain are allies rather than opposites.
c) The two cerebral hemispheres work in opposition to one another, each vying for supremacy on various kinds of tasks.
Consider This: Although the human brain has many identifiable structures, there is a reason why we talk about "the brain" rather than "the collection of separate squishy structures housed in your skull." 2.5.B Describe why the two hemispheres of the brain are allies rather than opposites.
d) Thinking that people have one brain is incorrect; people actually have "two brains" that operate independently of one another.
Consider This: Although the human brain has many identifiable structures, there is a reason why we talk about "the brain" rather than "the collection of separate squishy structures housed in your skull." 2.5.B Describe why the two hemispheres of the brain are allies rather than opposites.

Topic: The Two Hemispheres of the Brain
ANS: a, Analyze. LO 2.5.B Describe why the two hemispheres of the brain are allies rather than opposites. (3)

Quiz: The Flexible Brain

EOM Q2.6.1
Although people typically think of the brain as fully formed or "static" by adulthood, it actually has the ability to change in response to new experiences by strengthening some neural connections, pruning others, or reorganizing itself. This property is called _____.

a) plasticity
b) generativity
Consider This: There is a specific term used for the brain's ability to change and adapt. 2.6.A Define neural plasticity, and summarize some of the main evidence that the brain has the ability to change in response to new experiences.
c) reformation
Consider This: There is a specific term used for the brain's ability to change and adapt. 2.6.A Define neural plasticity, and summarize some of the main evidence that the brain has the ability to change in response to new experiences.
d) reformulation
Consider This: There is a specific term used for the brain's ability to change and adapt. 2.6.A Define neural plasticity, and summarize some of the main evidence that the brain has the ability to change in response to new experiences.

Topic: The Flexible Brain

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

ANS: a, Conceptual. LO 2.6.A Define neural plasticity, and summarize some of the main evidence that the brain has the ability to change in response to new experiences. (2)

EOM Q2.6.2
Which statement is correct regarding synaptic connections in the brain?

a) Useful connections are strengthened by learning and experience, whereas connections that are not useful tend to wither away, leaving an efficient network of interconnected neurons.

b) With proper stimulation, all neural connections continue to expand and multiply in scale as a person ages.
Consider This: Synaptic connections form and reform themselves over the lifespan, based on several factors. 2.6.A Define neural plasticity, and summarize some of the main evidence that the brain has the ability to change in response to new experiences.

c) The number of synaptic connections is low in childhood, reaches its peak by age 12, then slowly but steadily begins to decrease from that point through the remainder of a person's lifespan.
Consider This: Synaptic connections form and reform themselves over the lifespan, based on several factors. 2.6.A Define neural plasticity, and summarize some of the main evidence that the brain has the ability to change in response to new experiences.

d) The number of neural connections in the brain remains constant from birth to death because neurons cannot regenerate.
Consider This: Synaptic connections form and reform themselves over the lifespan, based on several factors. 2.6.A Define neural plasticity, and summarize some of the main evidence that the brain has the ability to change in response to new experiences.

Topic: The Flexible Brain
ANS: a, Conceptual. LO 2.6.A Define neural plasticity, and summarize some of the main evidence that the brain has the ability to change in response to new experiences. (2)

EOM Q2.6.3
Which of the following is a reliable sex difference in the brains of women and men that has been documented?

a) Parts of the parietal lobe are larger in men, whereas parts of the frontal lobes are larger in women, relative to the overall size of their brains.

b) The occipital lobe is generally larger in men than it is in women, relative to an individual's body size.
Consider This: Research suggests that there really is no reliable evidence that some people are "left-brained" while others are "right-brained." 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior.

c) The hypothalamus is generally more developed among women, whereas the thalamus is generally more developed among men.
Consider This: Research suggests that there really is no reliable evidence that some people are "left-brained" while others are "right-brained." 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior.

d) Men tend to be "left-brained," whereas women tend to be "right-brained."
Consider This: Research suggests that there really is no reliable evidence that some people are "left-brained" while others are "right-brained." 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior.

Topic: The Flexible Brain
ANS: a, Conceptual. LO 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior. (2)

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

EOM Q2.6.4
Which of the following is not a caution to bear in mind when interpreting research findings regarding sex differences in the brains of women and men?

a) Anatomical and biochemical sex differences in the brain have not been documented by researchers.
b) Sex differences in the brain could be the result, rather than the cause, of differences in behavior.
Consider This: Establishing a difference between two groups, explaining the reasons for that difference, and documenting the effects of any difference are all separate questions, and the answer to one does not necessarily imply an answer to the others. 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior.
c) Differences in the brain do not account for differences in behavior across situations.
Consider This: Establishing a difference between two groups, explaining the reasons for that difference, and documenting the effects of any difference are all separate questions, and the answer to one does not necessarily imply an answer to the others. 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior.
d) A brain difference does not necessarily produce a difference in behavior or performance.
Consider This: Establishing a difference between two groups, explaining the reasons for that difference, and documenting the effects of any difference are all separate questions, and the answer to one does not necessarily imply an answer to the others. 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior.

Topic: The Flexible Brain
ANS: a, Conceptual. LO 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior. (3)

EOM Q2.6.5
Stevie reads that women's and men's brains are organized differently, and therefore concludes that this organization produces sex differences in behavior. What is wrong about Stevie's logic?

a) A brain difference does not necessarily produce a behavioral difference; different brain organizations can produce the same behavioral outcomes.
b) Relatively small differences in brain organization—a few hundred neural connections or so—are sufficient to impact behavior; overall organization is beside the point.
Consider This: Your kitchen might have the pots and pans under the stove, whereas my kitchen might have them in a cabinet by the refrigerator; yet both of us are capable of cooking a delicious soufflé. 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior.
c) All brain differences are caused by sex stereotypes.
Consider This: Your kitchen might have the pots and pans under the stove, whereas my kitchen might have them in a cabinet by the refrigerator; yet both of us are capable of cooking a delicious soufflé. 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior.
d) Sex differences in behavior are actually due to sex differences in brain development rather than sex differences in brain organization.
Consider This: Your kitchen might have the pots and pans under the stove, whereas my kitchen might have them in a cabinet by the refrigerator; yet both of us are capable of cooking a delicious soufflé. 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior.

Topic: The Flexible Brain
ANS: a, Applied. LO 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior. (3)

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

End of Chapter Quiz

EOC Q2.1
Which part of the central nervous system acts reflexively, sending and receiving signals with little to no conscious effort?

a) the spinal cord
b) the brain
Consider This: The spinal column is a protective column of bones. 2.1.A Describe the primary functions of the central nervous system, and name its two main structures.
c) the spinal column
Consider This: The spinal column is a protective column of bones. 2.1.A Describe the primary functions of the central nervous system, and name its two main structures.
d) the parasympathetic system
Consider This: The spinal column is a protective column of bones. 2.1.A Describe the primary functions of the central nervous system, and name its two main structures.

Topic: The Nervous System
ANS: a, Conceptual. LO 2.1.A Describe the primary functions of the central nervous system, and name its two main structures. (2)

EOC Q2.2
The two subdivisions of the autonomic nervous system are the _____ nervous system and the _____ nervous system.

a) sympathetic; parasympathetic
b) central; peripheral
Consider This: There are many subdivisions of the human nervous system. Picture in your mind how each subsystem relates to its larger system. 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions.
c) somatic; sympathetic
Consider This: There are many subdivisions of the human nervous system. Picture in your mind how each subsystem relates to its larger system. 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions.
d) parasympathetic; peripheral
Consider This: There are many subdivisions of the human nervous system. Picture in your mind how each subsystem relates to its larger system. 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions.

Topic: The Nervous System
ANS: a, Conceptual. LO 2.1.B List the major structures and major divisions of the peripheral nervous system, and describe their primary functions. (2)

EOC Q2.3
What is the distribution between neurons and glial cells in a typical human brain?

a) Neurons and glia are about evenly divided across the 171 billion cells that make up a typical brain.
b) There are 12 times as many glial cells as there are neurons in the brain.
Consider This: Scientists have increasingly refined the tools and methods used to estimate the number and types of cells in the human brain. They believed for many years that the brain contained about 100 billion neurons and 10 times as many glia, but recent advances put the numbers much lower. 2.2.A Compare the functions of neurons and glial cells.
c) Neurons and glia have a 3:1 ratio; for every three neurons, there is one glial cell.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Consider This: Scientists have increasingly refined the tools and methods used to estimate the number and types of cells in the human brain. They believed for many years that the brain contained about 100 billion neurons and 10 times as many glia, but recent advances put the numbers much lower. 2.2.A Compare the functions of neurons and glial cells.
d) There are approximately 1 trillion neurons and 4 billion glial cells in a typical brain.
Consider This: Scientists have increasingly refined the tools and methods used to estimate the number and types of cells in the human brain. They believed for many years that the brain contained about 100 billion neurons and 10 times as many glia, but recent advances put the numbers much lower. 2.2.A Compare the functions of neurons and glial cells.

Topic: Communication in the Nervous System
ANS: a, Conceptual. LO 2.2.A Compare the functions of neurons and glial cells. (2)

EOC Q2.4
The three main parts of a neuron are _____.
a) dendrites, cell body, and axon
b) axon, myelin, and synapse
Consider This: Sketch what a typical neuron looks like, then try to identify each structure. 2.2.B Describe each of the three main parts of a neuron, and explain their functions.
c) cell body, soma, and dendrites
Consider This: Sketch what a typical neuron looks like, then try to identify each structure. 2.2.B Describe each of the three main parts of a neuron, and explain their functions.
d) myelin, sclera, and axon terminals
Consider This: Sketch what a typical neuron looks like, then try to identify each structure. 2.2.B Describe each of the three main parts of a neuron, and explain their functions.

Topic: Communication in the Nervous System
ANS: a, Factual. LO 2.2.B Describe each of the three main parts of a neuron, and explain their functions. (1)

EOC Q2.5
The production of new neurons from immature stem cells is a process known as _____.
a) neurogenesis
b) fertilization
Consider This: Research has revealed amazing capacities of embryonic stem cells, one of which is the potential for creating new neurons. Think about what this process is called. 2.2.C Explain how stem cells contribute to the process of neurogenesis.
c) plasticity
Consider This: Research has revealed amazing capacities of embryonic stem cells, one of which is the potential for creating new neurons. Think about what this process is called. 2.2.C Explain how stem cells contribute to the process of neurogenesis.
d) neurotransmission
Consider This: Research has revealed amazing capacities of embryonic stem cells, one of which is the potential for creating new neurons. Think about what this process is called. 2.2.C Explain how stem cells contribute to the process of neurogenesis.

Topic: Communication in the Nervous System
ANS: a, Factual. LO 2.2.C Explain how stem cells contribute to the process of neurogenesis. (1)

EOC Q2.6
"Argh!" cried Jerry. "I can feel sodium and potassium ions moving across the cell membranes of my neurons! It's so

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

distracting!" Two conclusions are correct regarding Jerry's statements. First, he cannot really feel ions moving across his cell membranes. Second, if he could, he would be describing _____.

a) an action potential
b) reuptake
Consider This: There is a term for the movement of ions across the semipermeable cell membrane of a neuron. 2.2.D Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters.
c) the synaptic cleft
Consider This: There is a term for the movement of ions across the semipermeable cell membrane of a neuron. 2.2.D Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters.
d) the process of neurogenesis
Consider This: There is a term for the movement of ions across the semipermeable cell membrane of a neuron. 2.2.D Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters.

Topic: Communication in the Nervous System
ANS: a, Applied. LO 2.2.D Outline the process by which neurons communicate with each other, and explain the basic functions of the synapse, action potential, synaptic vesicles, and neurotransmitters. (3)

EOC Q2.7
Three primary types of sex hormones are _____.

a) androgens, estrogens, and progesterone
b) androgens, testosterone, and protosterone
Consider This: Sex hormones are released by the gonads and the adrenal glands, and there are some fundamental types that are found in both women and men. 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior.
c) estrogens, gestrogens, and testosterone
Consider This: Sex hormones are released by the gonads and the adrenal glands, and there are some fundamental types that are found in both women and men. 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior.
d) cortisol, epinephrine, and norepinephrine
Consider This: Sex hormones are released by the gonads and the adrenal glands, and there are some fundamental types that are found in both women and men. 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior.

Topic: Communication in the Nervous System
ANS: a, Factual. LO 2.2.E Summarize the effects of some of the main neurotransmitters in the brain, and list four hormones that influence behavior. (1)

EOC Q2.8
How does transcranial magnetic stimulation (TMS) help researchers to understand functioning in the brain?

a) TMS can temporarily inactivate neural circuits, allowing researchers to observe the effects on behavior.
b) TMS measures changes in blood glucose levels in the brain, which are correlated with different types of information-processing tasks.
Consider This: TMS is a promising technique for intervening in the brain to study effects on behavior. Think about what the T, the M, and the S stand for. 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results.
c) TMS provides a record of brain-wave activity, which allows researchers to predict where future patterns of thoughts are likely to occur.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Consider This: TMS is a promising technique for intervening in the brain to study effects on behavior. Think about what the T, the M, and the S stand for. 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results.

d) TMS detects differences in blood oxygen absorption in the brain, providing a kind of "map" of brain functions that researchers can inspect.

Consider This: TMS is a promising technique for intervening in the brain to study effects on behavior. Think about what the T, the M, and the S stand for. 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results.

Topic: Mapping the Brain
ANS: a, Conceptual. LO 2.3.A Describe three techniques researchers use for manipulating the brain and observing the behavior that results. (2)

EOC Q2.9
Why should scientists and the public at large be cautious when interpreting the results of an fMRI study claiming to have found a "brain center" for a particular behavior?

a) Brain scan images can often convey misleading or oversimplified conclusions.

b) fMRI is still an experimental technique that has not been used much in research.

Consider This: Brain scan images can convey an air of "legitimacy" or authority to the results of an experiment, yet caution should be exercised when evaluating the conclusions. 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain.

c) EEG provides a better mechanism for pinpointing brain-based behavioral changes.

Consider This: Brain scan images can convey an air of "legitimacy" or authority to the results of an experiment, yet caution should be exercised when evaluating the conclusions. 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain.

d) Neurogenesis makes isolating brain functions to a particular region impossible.

Consider This: Brain scan images can convey an air of "legitimacy" or authority to the results of an experiment, yet caution should be exercised when evaluating the conclusions. 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain.

Topic: Mapping the Brain
ANS: a, Analyze. LO 2.3.B Describe five techniques researchers use for manipulating behavior and observing the effects on the brain. (2)

EOC Q2.10
The brain stem structure involved in sleeping, waking, and dreaming is the _____.

a) pons

b) medulla oblongata

Consider This: Think of the main structures in the brain stem and recall what each one does. All are involved in crucial but fairly low-level functions. 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum.

c) pituitary gland

Consider This: Think of the main structures in the brain stem and recall what each one does. All are involved in crucial but fairly low-level functions. 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum.

d) hypothalamic projection

Consider This: Think of the main structures in the brain stem and recall what each one does. All are involved in crucial but fairly low-level functions. 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Topic: A Tour Through the Brain
ANS: a, Conceptual. LO 2.4.A List and describe three main structures in the brain stem, explain the primary functions each structure performs, and discuss the processes controlled by the cerebellum. (2)

EOC Q2.11
Where is the thalamus located in the human brain?

a) deep inside the brain's interior, almost at the center of the brain
b) next to the pons on the brain stem
Consider This: Sketch for yourself the major structures in the human brain, and use the sketch as a guide to locating the thalamus. 2.4.B Describe the structure, function, and location of the thalamus.
c) below the cerebellum, but above the medulla oblongata
Consider This: Sketch for yourself the major structures in the human brain, and use the sketch as a guide to locating the thalamus. 2.4.B Describe the structure, function, and location of the thalamus.
d) above the pituitary gland and below the hypothalamus
Consider This: Sketch for yourself the major structures in the human brain, and use the sketch as a guide to locating the thalamus. 2.4.B Describe the structure, function, and location of the thalamus.

Topic: A Tour Through the Brain
ANS: a, Conceptual. LO 2.4.B Describe the structure, function, and location of the thalamus. (2)

EOC Q2.12
Why is the pituitary gland often called the body's "master gland"?

a) It secretes hormones that affect other endocrine glands.
b) It controls the functions of the hypothalamus.
Consider This: Glands secrete hormones, and hormones affect behavior. The hormones secreted by the pituitary gland can have widespread influence. 2.4.C Describe the structure, function, and location of the hypothalamus and pituitary gland.
c) It is located in the exact center of the human brain.
Consider This: Glands secrete hormones, and hormones affect behavior. The hormones secreted by the pituitary gland can have widespread influence. 2.4.C Describe the structure, function, and location of the hypothalamus and pituitary gland.
d) It secretes chemicals that affect the prefrontal cortex.
Consider This: Glands secrete hormones, and hormones affect behavior. The hormones secreted by the pituitary gland can have widespread influence. 2.4.C Describe the structure, function, and location of the hypothalamus and pituitary gland.

Topic: A Tour Through the Brain
ANS: a, Conceptual. LO 2.4.C Describe the structure, function, and location of the hypothalamus and pituitary gland. (2)

EOC Q2.13
Participants in an experiment are shown facial expressions of various emotions. Expressions of fear, sadness, anger, and happiness flash on a screen at a rapid rate. Although many parts of the brain are activated in response to these images, which of the following brain structures would play a particularly important role in processing this emotional content?

a) the amygdala
b) the olfactory bulb
Consider This: Recall the name of the brain structure that is involved in determining the emotional importance of information and making a primary determination of whether a person or situation

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

should be approached or avoided. 2.4.D Describe the structure, function, and location of the amygdala.
c) the hippocampus
Consider This: Recall the name of the brain structure that is involved in determining the emotional importance of information and making a primary determination of whether a person or situation should be approached or avoided. 2.4.D Describe the structure, function, and location of the amygdala.
d) the cerebellum
Consider This: Recall the name of the brain structure that is involved in determining the emotional importance of information and making a primary determination of whether a person or situation should be approached or avoided. 2.4.D Describe the structure, function, and location of the amygdala.

Topic: A Tour Through the Brain
ANS: a, Applied. LO 2.4.D Describe the structure, function, and location of the amygdala. (2)

EOC Q2.14
Keith and Heather were discussing cosmetic surgery one day. "I'm thinking of having my hippocampus removed," said Keith. "It's so tiny, and I just think my brain would look more streamlined without it." "Yeah…why don't you look into that," Heather replied in sarcastic disbelief. Why does Heather think Keith is pursuing a dramatically foolish idea?

a) Keith would be unable to form new memories.
b) Keith would lose his senses of smell and taste.
Consider This: What is the primary function of the hippocampus? 2.4.E Describe the structure, function, and location of the hippocampus.
c) Keith would be unable to recognize threatening stimuli in his environment.
Consider This: What is the primary function of the hippocampus? 2.4.E Describe the structure, function, and location of the hippocampus.
d) Keith would become partially deaf.
Consider This: What is the primary function of the hippocampus? 2.4.E Describe the structure, function, and location of the hippocampus.

Topic: A Tour Through the Brain
ANS: a, Applied. LO 2.4.E Describe the structure, function, and location of the hippocampus. (3)

EOC Q2.15
Why does the human cerebral cortex have so many deep crevices and wrinkles in it?

a) so that billions of neurons can fit in a relatively compact area
b) because a cell's axons need to extend in multiple directions at once
Consider This: The cortices of some animals are smooth, whereas the human cerebral cortex has lots of fissures and ridges to it. These are called sulci and gyri, if you want to impress your friends. If you want to impress yourself, think of why the cortex looks that way. 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex.
c) because evolutionary pressures caused many "restarts" to brain development
Consider This: The cortices of some animals are smooth, whereas the human cerebral cortex has lots of fissures and ridges to it. These are called sulci and gyri, if you want to impress your friends. If you want to impress yourself, think of why the cortex looks that way. 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex.
d) so that dendrites can coexist on multiple geometric planes across the cortex

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Consider This: The cortices of some animals are smooth, whereas the human cerebral cortex has lots of fissures and ridges to it. These are called sulci and gyri, if you want to impress your friends. If you want to impress yourself, think of why the cortex looks that way. 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex.

Topic: A Tour Through the Brain
ANS: a, Analyze. LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. (3)

EOC Q2.16
Where is the occipital lobe of the human cerebral cortex located?

a) at the back of the head
b) at the front of the head
Consider This: The parietal lobe is above the occipital lobe. 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex.
c) above the parietal lobe
Consider This: The parietal lobe is above the occipital lobe. 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex.
d) below the frontal lobe
Consider This: The parietal lobe is above the occipital lobe. 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex.

Topic: A Tour Through the Brain
ANS: a, Conceptual. LO 2.4.G Sketch the location of each of the lobes of the cerebral cortex, and explain the major functions each lobe performs, with particular reference to the prefrontal cortex. (2)

EOC Q2.17
Why would surgeons sever the corpus callosum in the human brain to create a split-brain patient?

a) in order to relieve the consequences of debilitating epileptic seizures
b) as a means of studying how the corpus callosum works
Consider This: Brain surgery is always a serious activity, and not one to be undertaken frivolously. 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres.
c) for the greater benefit of science
Consider This: Brain surgery is always a serious activity, and not one to be undertaken frivolously. 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres.
d) to gain access to brain structures such as the thalamus, hypothalamus, and hippocampus
Consider This: Brain surgery is always a serious activity, and not one to be undertaken frivolously. 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres.

Topic: The Two Hemispheres of the Brain
ANS: a, Analyze. LO 2.5.A Discuss the basic format of a split-brain experiment and what such results reveal about the functioning of the cerebral hemispheres. (3)

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

EOC Q2.18
Why is it incorrect to think of people as being "left-brained" or "right-brained"?

a) Information received in one hemisphere travels to the other hemisphere via the corpus callosum, so the "whole brain" is always engaged.
b) There are no identifiable functions associated with one hemisphere or the other; talk of being "left-brained" is a stereotype.
Consider This: There are indeed left and right hemispheres of the cerebral cortex, and those hemispheres do "specialize" to some extent in particular types of information processing. 2.5.B Describe why the two hemispheres of the brain are allies rather than opposites.
c) The division between "lower" and "upper" brain structures is more important, such that some people are "low-brained" and others are "high-brained."
Consider This: There are indeed left and right hemispheres of the cerebral cortex, and those hemispheres do "specialize" to some extent in particular types of information processing. 2.5.B Describe why the two hemispheres of the brain are allies rather than opposites.
d) "Left-brain" tasks are complex, whereas "right-brain" tasks deal with basic survival; therefore, we are all right-brained as long as we are alive and breathing.
Consider This: There are indeed left and right hemispheres of the cerebral cortex, and those hemispheres do "specialize" to some extent in particular types of information processing. 2.5.B Describe why the two hemispheres of the brain are allies rather than opposites.

Topic: The Two Hemispheres of the Brain
ANS: a, Analyze. LO 2.5.B Describe why the two hemispheres of the brain are allies rather than opposites. (3)

EOC Q2.19
Which statement best summarizes our current state of knowledge about the brain?

a) The human brain is a dynamic organ capable of modifying its circuits in response to experience and changes in the environment.
b) The human brain is fully formed in most humans by the age of 20 and undergoes relatively minor modifications after that.
Consider This: Research in neurogenesis and neural plasticity provides a developing picture of how the human brain operates. 2.6.A Define neural plasticity, and summarize some of the main evidence that the brain has the ability to change in response to new experiences.
c) The human brain is a static organ that executes information-processing routines that are shaped by natural selection.
Consider This: Research in neurogenesis and neural plasticity provides a developing picture of how the human brain operates. 2.6.A Define neural plasticity, and summarize some of the main evidence that the brain has the ability to change in response to new experiences.
d) The human brain shows explosive growth between birth and 5 years of age, then rapid decline after the age of 70.
Consider This: Research in neurogenesis and neural plasticity provides a developing picture of how the human brain operates. 2.6.A Define neural plasticity, and summarize some of the main evidence that the brain has the ability to change in response to new experiences.

Topic: The Flexible Brain
ANS: a, Analyze. LO 2.6.A Define neural plasticity, and summarize some of the main evidence that the brain has the ability to change in response to new experiences. (3)

EOC Q2.20
Why should we be cautious in interpreting research on sex differences in the human brain?

a) Findings that demonstrate a sex difference may not be replicated with new evidence and better techniques.
b) Promoting sex differences is a sociocultural means of creating divisions that do not exist.

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank

Consider This: Our knowledge of sex differences in the brain, like our knowledge of science in general, grows and develops over time. 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior.

c) Sex differences in brain structures or functions have not been found.
Consider This: Our knowledge of sex differences in the brain, like our knowledge of science in general, grows and develops over time. 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior.

d) MRI scans are notoriously inconclusive evidence for structural differences in the brain.
Consider This: Our knowledge of sex differences in the brain, like our knowledge of science in general, grows and develops over time. 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior.

Topic: The Flexible Brain
ANS: a, Analyze. LO 2.6.C Summarize cautions surrounding the conclusion that sex differences in the brain are linked to sex differences in behavior. (3)

Copyright © 2018, 2015, 2012 Pearson Education, Inc. All rights reserved.

Invitation to Psychology 7th edition Wade Test Bank