TOTAL ASSESSMENT GUIDE

Chapter 2

The Biological Perspective

Learning Objectives	Remember the Facts	Understand the Concepts	Apply What You Know	Analyze It
2.1: Identify the parts of a neuron and describe the function of each.	1-8, 10-12, 15-16, 18-24, 216-217, 219-221, 248-250, 263	9, 13, 17, 218	14	
2.2: Describe the action potential.	25, 28-29, 223, 263	26-27, 30-32, 222		
2.3: Describe how neurons use neurotransmitters to communicate with each other and with the body.	33-39, 43, 45, 47, 49-52, 54, 251-252	40-42, 53, 56	44, 46, 48, 55	
2.4: Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity	57-64, 66, 224-229, 253, 264	67, 70, 72	65, 68-69, 71	
2.5: Describe the role of the somatic and autonomic nervous systems.	73-74, 76-79, 83-84, 86-88, 90, 230-231, 253-254, 265	75, 81	80, 82, 85, 89, 91	
2.6: Explain how the hormones released by glands interact with the nervous system and affect behavior.	92-95, 97, 100-101, 232-236, 255	96, 266	98-99, 102	
2.7: Describe how the autonomic nervous system and body are impacted by stress.	103, 106-108, 111-115, 117-118, 121, 238-239, 256-257, 267	104, 119-120, 122-123, 237	105, 109-110, 116, 268	
2.8: Describe how lesioning studies and brain stimulation are used to study the brain.	124, 126	125		

Learning Objectives	Remember the Facts	Understand the Concepts	Apply What You Know	Analyze It
2.9: Describe how neuroimaging techniques can provide information about the brain's structure and function.	127, 131, 134-136, 240269,	130, 139	128-129, 132-133, 137-138, 140	
2.10: Identify the different structures of the bottom part of the brain, and describe the function of each.	141-142, 144-145, 148-149, 152-153, 241, 243-244	242	143, 146-147, 150-151, 154-157	
2.11: Identify structures of the brain involved in emotion, learning, memory, and motivation.	158-160, 163-164, 166, 168-170	161, 165, 245	162, 167, 171-172	
2.12: Identify the parts of the cortex that process the different senses and those that control movement of the body.	173-176, 178-180, 183-184, 187-188, 191, 197, 246	181, 198, 258	177, 182, 185-186, 189-190, 192-196	
2.13: Identify the parts of the cortex that are responsible for higher forms of thought, such as language.	199-200, 202, 259-260		201, 203-204	
2.14: Explain how some brain functions differ between the left and right hemispheres.	205, 208, 212-213, 247, 261-262, 270	209, 211	206-207, 210	
2.15: Identify some potential causes of attention-deficit/hyperactivity disorder.	215		214	

Name _____

Chapter 2 - Quick Quiz 1

1. The two main divisions of the nervous system are the _____ and _____.
   a) brain; spinal cord
   b) autonomic; somatic nervous systems
   c) peripheral nervous system; central nervous system
   d) glands; muscles

2. Which part of the neuron is responsible for maintaining the life of the cell?
   a) axon
   b) soma
   c) dendrite
   d) cell membrane

3. Which of the following neurotransmitters functions as a common inhibitory neurotransmitter in the brain?
   a) serotonin
   b) norepinephrine
   c) acetylcholine
   d) GABA

4. Which part of the nervous system takes the information received from the senses, makes sense out of it, makes decisions, and sends commands out to the muscles and the rest of the body?
   a) spinal cord
   b) brain
   c) reflexes
   d) interneurons

5. The part of the autonomic nervous system that is responsible for reacting to stressful events and bodily arousal is called the _____ nervous system.
   a) central
   b) somatic
   c) sympathetic
   d) parasympathetic

6. Hormones are_____.
   a) the female gonads
   b) chemicals released into the bloodstream by the endocrine glands
   c) chemicals found in the synaptic vesicles, which when released have an effect on the next cell
   d) the male gonads

7. A brain-imaging method using radio waves and magnetic fields of the body to produce detailed images of the brain is called _____.
   a) magnetic resonance imaging (MRI)
   b) electroencephalography (EEG)
   c) positron-emission tomography (PET)
   d) computerized axial tomography (CT)

8. What part of the brain acts as a relay station for incoming sensory information?
   a) hypothalamus
   b) thalamus
   c) cerebellum
   d) pituitary gland

9. Which of the following regions contains the primary visual cortex?
   a) frontal lobe
   b) parietal lobe
   c) temporal lobe
   d) occipital lobe

10. Which of the following is a function of the right hemisphere?

a) perception, expression of emotion, and recognition of patterns
b) sense of time and rhythm
c) speech, handwriting, and calculation
d) language processing in most individuals

Chapter 2 - Quick Quiz 1
Answer Key

1. c Explanation: These are the two main divisions of the nervous system. (Topic: An Overview of the Nervous System, Remember the Facts, 1 - Easy, LO 2.4 – Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity, APA 1.1)

2. b Explanation: The soma is responsible for maintaining the life of the cell. (Topic: Neurons and Nerves: Building the Network, Remember the Facts, 2 - Moderate, LO 2.1 - Identify the parts of a neuron and describe the function of each, APA 1.1)

3. d Explanation: GABA is an inhibitory neurotransmitter. (Topic: Neurons and Nerves: Building the Network, Remember the Facts, 1 - Easy, LO 2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body, APA 1.1)

4. b Explanation: That is the responsibility of the brain. (Topic: The Central Nervous System—The "Central Processing Unit", Remember the Facts, 1 - Easy, LO 2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity, APA 1.1)

5. c Explanation: The sympathetic nervous system is responsible for reacting to stressful events and bodily arousal. (Topic: The Peripheral Nervous System—Nerves on the Edge, Remember the Facts, 2 - Moderate, LO 2.5 - Describe the role of the somatic and autonomic nervous systems, APA 1.1)

6. b Explanation: This is the definition of hormones. (Topic: Distant Connections: The Endocrine Glands, Remember the Facts, 1 - Easy, LO 2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior?, APA 1.1)

7. a Explanation: MRI is a brain-imaging method using ratio waves and magnetic fields of the body. (Topic: Looking Inside the Living Brain, Remember the Facts, 3 - Difficult, LO 2.9 - Describe how neuroimaging techniques can provide information about the brain's structure and function, APA 1.1)

8. b Explanation: The thalamus acts as a relay station. (Topic: From the Bottom Up: The Structures of the Brain, Remember the Facts, 3 - Difficult, LO 2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each, APA 1.1)

9. d Explanation: The occipital lobes contain the primary visual cortex. (Topic: From the Bottom Up: The Structures of the Brain, Remember the Facts, 1 - Easy, LO 2.12 - Identify the parts of the cortex that control the different senses and the movement of the body, APA 1.1)

10. a Explanation: These are functions of the right hemisphere. (Topic: From the Bottom Up: The Structures of the Brain, Understand the Concepts, 2 - Moderate, LO 2.14 – Explain how some brain functions differ between the left and right hemispheres, APA 1.1)

Name _____

Chapter 2 - Quick Quiz 2

1. The branchlike structures that receive messages from other neurons are called _____.
   a) axons
   b) nerve bundles
   c) dendrites
   d) synapses

2. Which of the following are tiny sacs in a synaptic knob that release chemicals into the synapse?
   a) synaptic vesicles
   b) synaptic nodes
   c) terminal buttons
   d) synaptic gaps

3. Which of the following are responsible for acting as a facilitator of communication between neurons?
   a) motor neurons
   b) interneurons
   c) sensory neurons
   d) reflexes

4. Every deliberate action you make, such as pedaling a bike, walking, scratching, or smelling a flower, involves neurons in the _____ nervous system.
   a) sympathetic
   b) somatic
   c) parasympathetic
   d) autonomic

5. Which endocrine gland controls all of the other endocrine glands?
   a) thyroid
   b) adrenal
   c) thymus
   d) pituitary

6. The point at which the nerves from the left side of the body cross over into the right side of the brain, and vice versa, is the _____.
   a) reticular activating system
   b) pons
   c) medulla
   d) cerebellum

7. Signals from the neurons of which sense are NOT sent to the cortex by the thalamus?
   a) hearing
   b) smell
   c) taste
   d) vision

8. Which of the following is the section of the brain located at the rear and bottom of each cerebral hemisphere and contains the visual centers of the brain?
   a) occipital lobe
   b) parietal lobe
   c) temporal lobe
   d) frontal lobe

9. The area of the frontal lobe that is devoted to the production of fluent speech is _____ area.
   a) Broca's
   b) Gall's
   c) Wernicke's

d) Korsakoff's

10. Which of the following is the upper part of the brain consisting of two cerebral hemispheres and the structures that connect them?

a) occipital lobe
b) cerebrum
c) corpus callosum
d) cerebellum

Chapter 2 - Quick Quiz 2
Answer Key

1. c Explanation: Dendrites receive messages from other neurons. (Topic: Neurons and Nerves: Building the Network, Remember the Facts, 1 - Easy, LO 2.1 - Identify the parts of a neuron and describe the function of each, APA 1.1)

2. a Explanation: Synaptic vesicles are structures within the synaptic knobs. (Topic: Neurons and Nerves: Building the Network, Remember the Facts, 2 - Moderate, LO 2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body, APA 1.1)

3. b Explanation: Interneurons connect the sensory neurons to the motor neurons. (Topic: The Central Nervous System—The "Central Processing Unit", Remember the Facts, 1 - Easy, LO 2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity, APA 1.1)

4. b Explanation: The somatic nervous system controls voluntary muscle movement. (Topic: The Peripheral Nervous System—Nerves on the Edge, Understand the Concepts, 3 - Difficult, LO 2.5 - Describe the role of the somatic and autonomic nervous systems, APA 1.1)

5. d Explanation: The pituitary gland controls all other endocrine glands. (Topic: Distant Connections: The Endocrine Glands, Remember the Facts, 1 - Easy, LO 2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior?, APA 1.1)

6. c Explanation: This is the point where nerves cross over. (Topic: From the Bottom Up: The Structures of the Brain, Remember the Facts, 2 - Moderate, LO 2.11 - Identify the structures of the brain that control emotion, learning, memory, and motivation, APA 1.1)

7. b Explanation: Signals from the neurons of the sense of smell go directly into special parts of the brain called olfactory bulbs that are the structures responsible for smell. (Topic: From the Bottom Up: The Structures of the Brain, Remember the Facts, 2 - Moderate, LO 2.12 - Identify the parts of the cortex that control the different senses and the movement of the body, APA 1.1)

8. a Explanation: The occipital lobes contain the visual centers of the brain. (Topic: From the Bottom Up: The Structures of the Brain, Remember the Facts, 1 - Easy, LO 2.12 - Identify the parts of the cortex that control the different senses and the movement of the body, APA 1.1)

9. a Explanation: Broca's area is devoted to the production of fluent speech. (Topic: From the Bottom Up: The Structures of the Brain, Remember the Facts, 2 - Moderate, LO 2.13 - Identify the parts of the cortex are responsible for higher forms of thought, such as language, APA 1.1)

10. b Explanation: The cerebrum consists of the two cerebral hemispheres and the structures that connect them. (Topic: From the Bottom Up: The Structures of the Brain, Remember the Facts, 3 - Difficult, LO 2.13 - Identify the parts of the cortex are responsible for higher forms of thought, such as language, APA 1.1)

2 The Biological Perspective

MULTIPLE CHOICE

Neurons and Nerves: Building the Network

Learning Objective 2.1 -- Identify the parts of a neuron and describe the function of each

TB_02_01 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
The function of the _____ is to carry information to and from all parts of the body.
a) soma
Incorrect. The primary responsibility of the soma is to maintain the life of the neuron.
b) synapse
c) nervous system
Correct. Sending information to and from all parts of the body is the primary function of the nervous system.
d) endorphins
Topic: Neurons and Nerves: Building the Network
ANS: c, Remember the Facts, 1 - Easy, LO=2.1 - Identify the parts of a neuron and describe the function of each
% correct 91 a= 2 b= 4 c= 91 d=33 *r* = .32
% correct 100 a= 0 b= 0 c= 100 d= 0 *r* = .00
APA=1.1

TB_02_02 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
The nervous system is defined as_____.
a) a complex network of cells that carries information to and from all parts of the body
Correct. The nervous system is a complex network of cells that carry information to and from all parts of the body.
b) a specialized cell that makes up the brain and nervous system
c) all nerves and neurons that are not contained in the brain and spinal cord but that run throughout the body itself
Incorrect. The nervous system includes networks of neurons that are in the brain and spinal cord.
d) a gland located in the brain that secretes human growth hormone
Topic: Neurons and Nerves: Building the Network
ANS: a, Remember the Facts, 1 - Easy, LO=2.1 - Identify the parts of a neuron and describe the function of each
% correct 92 a= 92 b= 1 c= 6 d= 1 *r* = .27
% correct 94 a= 94 b= 1 c=4 d= 0 *r* = .26
APA=1.1

TB_02_03 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.2
The branch of life sciences which involves the structure and function of the brain and nervous system, including neurons, nerves, and nervous tissue is called _____.
a) neuroscience
Correct. This is the branch of life sciences that covers these topics.
b) bioscience
Incorrect. The correct answer is neuroscience.

c) brain scientology
d) neurostemology

Topic: Neurons and Nerves: Building the Network
ANS: a, Remember the Facts, 1 - Easy, LO=2.1 - Identify the parts of a neuron and describe the function of each
APA=1.2

TB_02_04 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
A specialized cell that makes up the nervous system that receives and sends messages within that system is called a _____.

a) glial cell

Incorrect. Glial cells serve as a structure for neurons.

b) neuron

Correct. A neuron is a specialized cell that makes up the nervous system that receives and sends messages within that system.

c) cell body
d) myelin sheath

Topic: Neurons and Nerves: Building the Network
ANS: b, Remember the Facts, 1 - Easy, LO=2.1 - Identify the parts of a neuron and describe the function of each
% correct 96 a= 4 b= 96 c= 0 d= 0 *r* = .19
% correct 97 a= 2 b= 97 c= 1 d= 0 *r* = .39
APA=1.1

TB_02_05 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
The part of the neuron whose name literally means "branch" is a(n) _____.

a) axon

Incorrect. Dendrite is the correct answer.

b) dendrite

Correct. Dendrite comes from the word tree.

c) myelin
d) soma

Topic: Neurons and Nerves: Building the Network
ANS: b, Remember the Facts, 2 - Moderate, LO=2.1 - Identify the parts of a neuron and describe the function of each
% correct 77 a= 20 b= 77 c= 1 d= 1 *r* = .32
APA=1.1

TB_02_06 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
The branchlike structures that *receive* messages from other neurons are called _____.

a) axons

Incorrect. Axons send but do not receive messages.

b) nerve bundles
c) dendrites

Correct. Dendrites receive messages from other neurons.

d) synapses

Topic: Neurons and Nerves: Building the Network
ANS: c, Remember the Facts, 1 - Easy, LO=2.1 - Identify the parts of a neuron and describe the function of each
% correct 84 a= 10 b= 2 c= 84 d= 4 *r* = .39
% correct 83 a=11 b= 0 c= 83 d= 5 *r* = .31
APA=1.1

TB_02_07 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
Which part of the neuron is responsible for maintaining the life of the cell?

a) axon
b) soma

Correct. The soma is responsible for maintaining the life of the cell.

c) dendrite
d) cell membrane

Incorrect. The soma is responsible for maintaining the life of the cell.

Topic: Neurons and Nerves: Building the Network
ANS: b, Remember the Facts, 2 - Moderate, LO=2.1 - Identify the parts of a neuron and describe the function of each
% correct 70 a= 5 b= 70 c= 2 d= 23 *r* = .37
% correct 74 a= 0 b= 74 c= 26 d= 1 *r* = .32
APA=1.1

TB_02_08 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
The part of a neuron that contains the nucleus and keeps the entire cell alive and functioning is the _____.

a) axon
b) cell membrane

Incorrect. The soma is responsible for maintaining the life of the cell.

c) dendrite
d) soma

Correct. The soma is responsible for maintaining the life of the cell.

Topic: Neurons and Nerves: Building the Network
ANS: d, Remember the Facts, 2 - Moderate, LO=2.1 - Identify the parts of a neuron and describe the function of each
% correct 67 a= 7 b= 23 c= 2 d= 67 *r* = .56
APA=1.1

TB_02_09 Neurons and Nerves: Building the Network_Understand_LO=2.1, APA 1.1
Dendrite is to axon as:

a) send is to receive.

Incorrect. This is the opposite of the correct answer.

b) send is to regulate.
c) receive is to send.

Correct. Dendrites are treelike parts of the neuron that are designed to receive messages. The axon sends messages to other neurons.

d) receive is to release.

Topic: Neurons and Nerves: Building the Network
ANS: c, Understand the Concepts, 2 - Moderate, LO=2.1 - Identify the parts of a neuron and describe the function of each
APA=1.1

TB_02_10 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
Which part of a neuron is attached to the soma and carries messages out to other cells?

a) soma
b) axon

Correct. The axon carries messages to other cells.

c) dendrite

Incorrect. Dendrites receive messages.

d) cell membrane

Topic: Neurons and Nerves: Building the Network
ANS: b, Remember the Facts, 1 - Easy, LO=2.1 - Identify the parts of a neuron and describe the function of each
% correct 81 a= 2 b= 81 c= 14 d= 4 *r* = .31
APA=1.1

TB_02_11 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
The function of the neuron's axon is to _____.

a) carry messages to other cells

Correct. The function of the axon is to carry messages to other cells.

b) regulate the neuron's life processes

c) receive messages from neighboring neurons

Incorrect. Dendrites, not axons, receive messages.

d) insulate against leakage of electrical impulses

Topic: Neurons and Nerves: Building the Network
ANS: a, Remember the Facts, 2 - Moderate, LO=2.1 - Identify the parts of a neuron and describe the function of each
% correct 67 a= 67 b= 2 c= 10 d= 21 *r* = .41
% correct 80 a= 80 b= 6 c= 13 d= 2 *r* = .30
APA=1.1

TB_02_12 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
_____ receive messages from other neurons and _____ send messages to other neurons.

a) Axons; dendrites

Incorrect. Axons send messages, and dendrites receive messages.

b) Axon; soma

c) Soma; glial cells

d) Dendrites; axons

Correct. Dendrites receive messages, and axons send messages to other cells.

Topic: Neurons and Nerves: Building the Network
ANS: d, Remember the Facts, 2 - Moderate, LO=2.1 - Identify the parts of a neuron and describe the function of each
% correct 71 a= 23 b= 3 c= 4 d= 71 *r* = .39
% correct 78 a= 17 b= 3 c= 1 d= 78 *r* = .46
APA=1.1

TB_02_13 Neurons and Nerves: Building the Network_Understand_LO=2.1, APA 1.1
Which of the following best represents the order in which a neuron receives and transmits information?

a) dendrites, cell body, axon, axon terminals

Correct. The dendrite receives a message, the cell body processes it, the axon takes a message to the axon terminals, and the terminal buttons release neurotransmitters.

b) axon terminals, dendrites, cell body, axon

c) cell body, dendrites, axon terminals, axon

Incorrect. Every part of this answer is out of the correct order.

d) axon, cell body, dendrites, axon terminals

Topic: Neurons and Nerves: Building the Network
ANS: a, Understand the Concepts, 2 - Moderate, LO=2.1 - Identify the parts of a neuron and describe the function of each
APA=1.1

TB_02_14 Neurons and Nerves: Building the Network_Apply_LO=2.1, APA 1.1
Your teacher asks you to describe the sequence of parts of a neuron that the impulse travels during neural conduction. Which of the following sequences will you offer?

a) dendrites, axon, soma, terminal buttons

b) terminal buttons, axon, soma, dendrites

c) axon, soma, dendrites, terminal buttons

Incorrect. The neural impulse begins with the receipt of messages from the dendrites.

d) dendrites, soma, axon, terminal buttons

Correct. This answer describes the correct sequence.

Topic: Neurons and Nerves: Building the Network
ANS: d, Apply What You Know, 2 - Moderate, LO=2.1 - Identify the parts of a neuron and describe the function of each
APA=1.1

TB_02_15 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
The swellings or knobs at the end of the axon are called _____.

a) presynaptic terminals

Correct. The presynaptic terminals are located at the ends of the axon.

b) synaptic vesicles

Incorrect. Synaptic vesicles are structures within the synaptic knobs.

c) synapses
d) receptor sites

Topic: Neurons and Nerves: Building the Network
ANS: a, Remember the Facts, 1 - Easy, LO=2.1 - Identify the parts of a neuron and describe the function of each
APA=1.1

TB_02_16 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
What is the term used to describe the bulbs located at the end of the axon?

a) axon terminals

Correct. The axon terminals are located at the end of the axon.

b) synaptic vesicles

Incorrect. Synaptic vesicles are structures within the synaptic knobs.

c) synapses
d) receptor sites

Topic: Neurons and Nerves: Building the Network
ANS: a, Remember the Facts, 2 - Moderate, LO=2.1 - Identify the parts of a neuron and describe the function of each
% correct 59 a= 59 b= 15 c= 3 d= 22 *r* = .48
% correct 52 a= 52 b= 20 c= 13 d= 15 *r* = .38
APA=1.1

TB_02_17 Neurons and Nerves: Building the Network_Understand_LO=2.1, APA 1.1
What are two roles of glial cells?

a) acting as insulation and providing structure to surrounding neurons

Correct. This answer defines two roles of glial cells.

b) shaping cells and moving new neurons into place

Incorrect. Glial cells provide structure and insulation to neurons.

c) regulating metabolic activity and serving as pain detectors
d) monitoring neural transmission and releasing hormones in the brain

Topic: Neurons and Nerves: Building the Network
ANS: a, Understand the Concepts, 3 - Difficult, LO=2.1 - Identify the parts of a neuron and describe the function of each
% correct 59 a= 59 b= 4 c= 11 d= 22 *r* = .32
% correct 61 a= 61 b= 8 c= 7 d= 24 *r* = .32
APA=1.1

TB_02_18 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
A cell in the human nervous system whose primary function is to provide insulation and structure for neurons on which they may develop and work is called a(n) _____.

a) epidermal cell
b) adipose cell
c) glial cell

Correct. Glial cells serve as a structure on which neurons develop and work.

d) myelin sheath

Incorrect. The myelin sheath does not serve as a structure on which neurons develop and work.

Topic: Neurons and Nerves: Building the Network

ANS: c, Remember the Facts, 3 - Difficult, LO=2.1 - Identify the parts of a neuron and describe the function of each

% correct 46 a= 3 b= 1 c= 46 d= 51 *r* = .34

APA=1.1

TB_02_19 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1

The two types of glial cells are called _____ and _____.

a) occipital; lobitical

b) oligodendrocytes; Schwann cells

Correct. These are the two types according to the text.

c) occipital; Schwann

Incorrect. B is the correct answer.

d) oligodendrocytes; lobitical

Topic: Neurons and Nerves: Building the Network

ANS: b, Remember the Facts, 3 - Difficult, LO=2.1 - Identify the parts of a neuron and describe the function of each

APA=1.1

TB_02_20 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1

What is a function of myelin?

a) to serve as a structure for neurons

Incorrect. This is the function of glial cells, not myelin.

b) to monitor neural activity

c) to speed up the neural impulse

Correct. Myelin speeds up the neural impulse.

d) to produce neurotransmitters

Topic: Neurons and Nerves: Building the Network

ANS: c, Remember the Facts, 2 - Moderate, LO=2.1 - Identify the parts of a neuron and describe the function of each

% correct 71 a= 14 b= 7 c= 71 d= 9 *r* = .33

% correct 62 a= 28 b= 3 c= 62 d= 8 *r* = .44

APA=1.1

TB_02_21 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1

Which of the following is true about myelin?

a) It's made of a fatty substance.

Correct. Myelin is made up of a fatty type of tissue called glial cells.

b) It is covered by axons.

Incorrect. Myelin covers axons. It is not covered by axons.

c) It inhibits neural communication.

d) It slows down neuronal operations.

Topic: Neurons and Nerves: Building the Network

ANS: a, Remember the Facts, 2 - Moderate, LO=2.1 - Identify the parts of a neuron and describe the function of each

APA=1.1

TB_02_22 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1

One purpose of the _____ is to speed up the neural message traveling down the axon.

a) receptor site

b) axon terminal

Incorrect. The axon terminal does not speed up the neural impulse.

c) myelin

Correct. Myelin speeds up the neural impulse.

d) synaptic vesicle

Topic: Neurons and Nerves: Building the Network
ANS: c, Remember the Facts, 2 - Moderate, LO=2.1 - Identify the parts of a neuron and describe the function of each
% correct 78 a= 2 b= 8 c= 78 d= 13 *r* = .31
APA=1.1

TB_02_23 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
A group of axons bundled together coated in myelin that travels together through the body is called a _____.

a) synaptic vesicle
b) nerve

Correct. Bundles of myelin-coated axons travel together in cables called nerves.

c) neurilemma

Incorrect. Neurilemma enable damaged neurons to repair themselves.

d) myelinated pathway

Topic: Neurons and Nerves: Building the Network
ANS: b, Remember the Facts, 2 - Moderate, LO=2.1 - Identify the parts of a neuron and describe the function of each
% correct 60 a= 20 b= 60 c= 6 d= 14 *r* = .49
APA=1.1

TB_02_24 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
A nerve is a group of _____ bundled together.

a) axons

Correct. Nerves are bundles of myelin-coated axons.

b) interneurons
c) dendrites

Incorrect. Dendrites are part of the neuron.

d) glial cells

Topic: Neurons and Nerves: Building the Network
ANS: a, Remember the Facts, 3 - Difficult, LO=2.1 - Identify the parts of a neuron and describe the function of each
% correct 37 a= 37 b= 37 c= 8 d= 18 *r* = .31
APA=1.1

Learning Objective 2.2 – Describe the action potential.

TB_02_25 Neurons and Nerves: Building the Network_Remember_LO=2.2, APA 1.1
When a cell is "at rest," it is in a state called the _____.

a) stopping point
b) obcipitation junction

Incorrect. This is a fictitious word.

c) resting potential

Correct. A cell at rest is in a state called the resting potential.

d) action potential

Topic: Neurons and Nerves: Building the Network
ANS: c, Remember the Facts, 1 - Easy, LO=2.2 - Describe the action potential
% correct 85 a= 1 b= 0 c= 85 d= 13 *r* = .41
APA=1.1

TB_02_26 Neurons and Nerves: Building the Network_Understand_LO=2.2, APA 1.1
The charge that a neuron at rest maintains is due to the presence of a high number of _____ charged ions inside the neuron's membrane.

a) actively

b) passively
c) negatively

Correct. Negatively charged ions inside the neuron's membrane are what give rise to a negative resting potential.

d) positively

Incorrect. It is during the action potential that the positively charged ions flow into the neuron and outnumber the negatively charged ions.

Topic: Neurons and Nerves: Building the Network
ANS: c, Understand the Concepts, 2 - Moderate, LO=2.2 - Describe the action potential
APA=1.1

TB_02_27 Neurons and Nerves: Building the Network_Understand_LO=2.2, APA 1.1
When the electric potential in a cell is in action versus a resting state, this electrical charge reversal is known as the _____.

a) resting potential

Incorrect. This would be when a cell continued to be at rest.

b) excitation reaction
c) action potential

Correct. This is the state where the electrical charge is reversed.

d) permeable reaction

Topic: Neurons and Nerves: Building the Network
ANS: c, Understand the Concepts, 2 - Moderate, LO=2.2 - Describe the action potential
% correct 75 a= 14 b= 10 c= 75 d= 1 *r* = .31
APA=1.1

TB_02_28 Neurons and Nerves: Building the Network_Remember_LO=2.2, APA 1.1
What do we call the state of a neuron when it is not firing a neural impulse?

a) action potential

Incorrect. Action potential is the state a neuron is in when firing a neural impulse.

b) resting potential

Correct. Resting potential is the state a neuron is in when not firing a neural impulse.

c) myelination signal
d) transmission impulse

Topic: Neurons and Nerves: Building the Network
ANS: b, Remember the Facts, 1 - Easy, LO=2.2 - Describe the action potential
% correct 84 a= 11 b= 84 c= 1 d=4 *r* = .18
APA=1.1

TB_02_29 Neurons and Nerves: Building the Network_Remember_LO=2.2, APA 1.1
The state during which a neuron contains more negatively charged ions inside the cell than outside the cell and is not firing is referred to as the _____.

a) action potential

Incorrect. Action potential is the state a neuron is in when firing.

b) quiet potential
c) synaptic potential
d) resting potential

Correct. Resting potential is the state a neuron is in when a cell is not firing a neural impulse.

Topic: Neurons and Nerves: Building the Network
ANS: d, Remember the Facts, 1 - Easy, LO=2.2 - Describe the action potential
% correct 85 a= 4 b= 4 c= 7 d= 85 *r* = .19
APA=1.1

TB_02_30 Neurons and Nerves: Building the Network_Understand_LO=2.2, APA 1.1
The term "fire" when referring to neural transmission indicates that a neuron:

a) has become less positive in charge.
b) has received, in its dendrites, appropriate inputs from other neurons.

Correct. A neuron fires after the dendrites receive enough stimulation to trigger the cell body to generate an action potential.

c) is unable to transmit information to another neuron.

d) has become more negative in charge.

Incorrect. In fact, the firing state of the neuron occurs when it generates a positive charge rather than a negative charge.

Topic: Neurons and Nerves: Building the Network
ANS: b, Understand the Concepts, 3 - Difficult, LO=2.2 - Describe the action potential
APA=1.1

TB_02_31 Neurons and Nerves: Building the Network_Understand_LO=2.2, APA 1.1
During action potential, the electrical charge inside the neuron is _____ the electrical charge outside the neuron.

a) positive compared to

Correct. There are more positively charged ions inside the cell than outside.

b) larger than

c) negative compared to

Incorrect. During resting potential, the inside is more negatively charged.

d) smaller than

Topic: Neurons and Nerves: Building the Network
ANS: a, Understand the Concepts, 3 - Difficult, LO=2.2 - Describe the action potential
APA=1.1

TB_02_32 Neurons and Nerves: Building the Network_Understand_LO=2.2, APA 1.1
When a neuron fires, it fires in a(n) _____ fashion, as there is no such thing as "partial" firing.

a) all-or-none

Correct. This is the term used to describe how neurons fire according to the book.

b) rapid fire

c) accidental patterned

d) quick succession

Incorrect. This is not the term referred to in the book.

Topic: Neurons and Nerves: Building the Network
ANS: a, Understand the Concepts, 2 - Moderate , LO=2.2 - Describe the action potential
APA=1.1

Learning Objective 2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body.

TB_02_33 Neurons and Nerves: Building the Network_Remember_LO=2.3, APA 1.1
The saclike structures found inside the synaptic knob containing chemicals are called _____.

a) axon terminals

Incorrect. The axon terminals are limb-like structures.

b) synapses

c) synaptic vesicles

Correct. Synaptic vesicles are structures within the synaptic knobs.

d) receptor sites

Topic: Neurons and Nerves: Building the Network
ANS: c, Remember the Facts, 2 - Moderate , LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
% correct 69 a= 5 b= 8 c= 69 d= 17 *r* = .53
% correct 64 a= 20 b= 12 c= 64 d= 14 *r* = .45
APA=1.1

TB_02_34 Neurons and Nerves: Building the Network_Remember_LO=2.3, APA 1.1
Which of the following are tiny sacs in an axon terminal that release chemicals into the synapse?

a) synaptic vesicles

Correct. Synaptic vesicles are structures within the synaptic knobs.

b) synaptic nodes

c) terminal buttons

Incorrect. Terminal buttons are the same as synaptic knobs.

d) synaptic gaps

Topic: Neurons and Nerves: Building the Network
ANS: a, Remember the Facts, 2 - Moderate, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
APA=1.1

TB_02_35 Neurons and Nerves: Building the Network_Remember_LO=2.3, APA 1.1
A chemical found in the synaptic vesicles which, when released, has an effect on the next cell is called a _____.

a) glial cell

b) neurotransmitter

Correct. Neurotransmitters are stored in the synaptic vesicles.

c) precursor cell

d) synapse

Incorrect. The synapse is the space between the synaptic knob of one cell and the dendrites of the next cell.

Topic: Neurons and Nerves: Building the Network
ANS: b, Remember the Facts, 2 - Moderate , LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body% correct 74 a= 4 b= 74 c= 4 d= 18 *r* = .34
APA=1.1

TB_02_36 Neurons and Nerves: Building the Network_Remember_LO=2.3, APA 1.1
The term *neurotransmitter* refers to _____.

a) a chemical found in the synaptic vesicles that is released into the synapse

Correct. Neurotransmitters are chemicals.

b) any one of a number of chemical compounds that increase the activity of the endocrine system

c) the chemical substance found in the cell membrane

Incorrect. The neurotransmitter is found in the synaptic vesicle.

d) the DNA contained in the nucleus of every neuron

Topic: Neurons and Nerves: Building the Network
ANS: a, Remember the Facts, 2 - Moderate, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the bodyAPA=1.1

TB_02_37 Neurons and Nerves: Building the Network_Remember_LO=2.3, APA 1.1
The fluid-filled space between the synaptic knob of one cell and the dendrites of the next cell is called the _____.

a) receptor site

Incorrect. Molecules that float across the synapse fit themselves into receptor sites, thus activating the next cell.

b) synapse

Correct. The synapse is the space between the axon of a sending neuron and the dendrites of a receiving neuron.

c) synaptic knob

d) axon terminal

Topic: Neurons and Nerves: Building the Network
ANS: b, Remember the Facts, 1 - Easy, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the bodyAPA=1.1

TB_02_38 Neurons and Nerves: Building the Network_Remember_LO=2.3, APA 1.1
The action potential causes neurotransmitters to be released into the _____.

a) myelin sheath
b) axon
c) synapse

Correct. Neurotransmitters are released into the synapse.

d) synaptic vesicle

Incorrect. Neurotransmitters are stored in the synaptic vesicle.

Topic: Neurons and Nerves: Building the Network
ANS: c, Remember the Facts, 3 - Difficult, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body% correct 59 a= 8 b= 11 c= 59 d= 22 *r* = .32
% correct 56 a= 5 b= 16 c= 56 d= 27 *r* = .35
APA=1.1

TB_02_39 Neurons and Nerves: Building the Network_Remember_LO=2.3, APA 1.1
_____ are holes in the surface of the dendrites or certain cells of the muscles and glands that are shaped to fit only certain neurotransmitters.

a) Neurotransmitters
b) Axons
c) Synaptic vesicles

Incorrect. Neurotransmitters are stored in the synaptic vesicle.

d) Receptor sites

Correct. Molecules that float across the synapse fit themselves into receptor sites like keys fitting into a lock, thus activating the next cell.

Topic: Neurons and Nerves: Building the Network
ANS: d, Remember the Facts, 1 - Easy, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
APA=1.1

TB_02_40 Neurons and Nerves: Building the Network_Understand_LO=2.3, APA 1.1
Which structure is like a locked door that only certain neurotransmitter keys can unlock?

a) synapses

Incorrect. Synapses are microscopic fluid-filled spaces between neurons.

b) receptor sites

Correct. Only certain neurotransmitters can fit into receptor sites.

c) neural chiasms
d) response terminals

Topic: Neurons and Nerves: Building the Network
ANS: b, Understand the Concepts, 2 - Moderate, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
APA=1.1

TB_02_41 Neurons and Nerves: Building the Network_Understand_LO=2.3, APA 1.1
_____ synapses make it more likely that a neuron will send its message to other neurons, whereas _____ synapses make it less likely that a neuron will send its message.

a) Excitatory; inhibitory

Correct. Excitatory synapses turn cells on and inhibitory ones turn cells off.

b) Inhibitory; excitatory

Incorrect. Inhibitory synapses turn cells off and excitatory ones turn cells on.

c) Augmentation; depletion
d) Depletion; augmentation

Topic: Neurons and Nerves: Building the Network
ANS: a, Understand the Concepts, 1 - Easy, LO=2.3 - Describe how neurons use neurotransmitters to

communicate with each other and with the body% correct 89 a= 89 b= 8 c= 3 d= 0 *r* = .48
APA=1.1

TB_02_42 Neurons and Nerves: Building the Network_Understand_LO=2.3, APA 1.1
Agonist is to antagonist as:

a) neuromodulator is to neurotransmitter.
b) reuptake is to receptor.
c) mimic is to block.

Correct. Agonists mimic neurotransmitters by stimulating specific receptor sites, and antagonists block receptor sites.

d) block is to mimic.

Incorrect. This is the opposite of the correct answer.
Topic: Neurons and Nerves: Building the Network
ANS: c, Understand the Concepts, 2 - Moderate, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
APA=1.1

TB_02_43 Neurons and Nerves: Building the Network_Remember_LO=2.3, APA 1.1
Curare, a poison, works by _____.

a) blocking receptor sites and acting as an antagonist for acetylcholine

Correct. This drug acts as an antagonist for acetylcholine.

b) stimulating the release of excessive amounts of acetylcholine

Incorrect. This drug inhibits the release of acetylcholine.

c) stimulating the release of neurotransmitters
d) inhibiting the production of inhibitory neurotransmitters

Topic: Neurons and Nerves: Building the Network
ANS: a, Remember the Facts, 3 - Difficult, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
% correct 30 a= 30 b= 26 c= 20 d= 24 *r* = .23
% correct 41 a= 41 b= 24 c= 22 d= 13 *r* = .22
APA=1.1

TB_02_44 Neurons and Nerves: Building the Network_Apply_LO=2.3, APA 1.1, 1.3
After being bitten by a black widow spider, Jean starts to convulse. This is a result of _____.

a) a lack of GABA being released into her bloodstream

Incorrect. The correct answer is d.

b) a resurgence of neurotransmitters overstimulating her brain stem
c) a surge of chemicals blocking the transmission of fluids to the spinal cord
d) a flood of acetylcholine releasing into the body's muscle system

Correct. This is the result of the bite. The result can also include death.
Topic: Neurons and Nerves: Building the Network
ANS: d, Apply What You Know, 3 - Difficult, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
APA=1.1, 1.3

TB_02_45 Neurons and Nerves: Building the Network_Remember_LO=2.3, APA 1.1
_____ plays a critical role as a neurotransmitter that stimulates skeletal muscles to contract.

a) Acetylcholine

Correct. Acetylcholine is an excitatory neurotransmitter that stimulates muscles to contract.

b) GABA

Incorrect. GABA is an inhibitory neurotransmitter.

c) Dopamine
d) Endorphin

Topic: Neurons and Nerves: Building the Network
ANS: a, Remember the Facts, 1 - Easy, LO=2.3 - Describe how neurons use neurotransmitters to

communicate with each other and with the body
APA=1.1

TB_02_46 Neurons and Nerves: Building the Network _Apply_LO=2.3, APA 1.1, 1.3
Sara has been experiencing a serious memory problem. An interdisciplinary team has ruled out a range of causes and believes that a neurotransmitter is involved. Which neurotransmitter is most likely involved in this problem?

a) GABA

Incorrect. GABA has a tranquilizing effect.

b) dopamine
c) serotonin
d) acetylcholine

Correct. Acetylcholine is found in a part of the brain responsible for forming new memories.

Topic: Neurons and Nerves: Building the Network
ANS: d, Apply What You Know, 2 - Moderate, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
% correct 33 a= 0 b= 26 c=41 d= 33 *r* = .19
APA=1.1, 1.3

TB_02_47 Neurons and Nerves: Building the Network_Remember_LO=2.3, APA 1.1
Which neurotransmitter is associated with sleep, mood, and appetite?

a) GABA

Incorrect. GABA is associated with helping calm anxiety.

b) serotonin

Correct. Serotonin is associated with mood, sleep, and appetite.

c) dopamine
d) acetylcholine

Topic: Neurons and Nerves: Building the Network
ANS: b, Remember the Facts, 2 - Moderate, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
% correct 60 a= 6 b= 60 c= 25 d= 8 *r* = .26
APA=1.1

TB_02_48 Neurons and Nerves: Building the Network_Apply_LO=2.3, APA 1.1, 1.3
Andy has decided to seek medical help for mood disturbances and appetite problems. Which neurotransmitter is most likely involved in the problems Andy is experiencing?

a) GABA

Incorrect. GABA is involved in sleep and inhibits movement but is not associated with mood or appetite.

b) dopamine
c) serotonin

Correct. Serotonin is associated with mood and appetite.

d) acetylcholine

Topic: Neurons and Nerves: Building the Network
ANS: c, Apply What You Know, 2 - Moderate, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
APA=1.1, 1.3

TB_02_49 Neurons and Nerves: Building the Network_Remember_LO=2.3, APA 1.1
Which of the following neurotransmitters functions as a major inhibitory neurotransmitter in the brain?

a) serotonin
b) GABA

Correct. GABA is an inhibitory neurotransmitter.

c) acetylcholine

Incorrect. Acetylcholine is an excitatory neurotransmitter.

d) norepinephrine

Topic: Neurons and Nerves: Building the Network
ANS: b, Remember the Facts, 1 - Easy, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
APA=1.1

TB_02_50 Neurons and Nerves: Building the Network_Remember_LO=2.3, APA 1.1
GABA functions as _____.

a) the major neurotransmitter involved in voluntary movements
b) an inhibitory neurotransmitter in the brain

Correct. GABA is an inhibitory neurotransmitter.

c) the neurotransmitter responsible for slowing intestinal activity during stress
d) the major excitatory neurotransmitter in the brain

Incorrect. GABA is an inhibitory neurotransmitter.

Topic: Neurons and Nerves: Building the Network
ANS: b, Remember the Facts, 3 - Difficult, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
APA=1.1

TB_02_51 Neurons and Nerves: Building the Network_Remember_LO=2.3, APA 1.1
Endorphins are _____.

a) found where neurons meet skeletal muscles
b) less powerful than enkaphalins
c) pain-controlling chemicals

Correct. Endorphins are pain-controlling chemicals.

d) radically different in function from neurotransmitters

Incorrect. Endorphins are *neurotransmitters.*

Topic: Neurons and Nerves: Building the Network
ANS: c, Remember the Facts, 2 - Moderate, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
% correct 74 a= 4 b= 7 c= 74 d= 15 *r* = .41
APA=1.1

TB_02_52 Neurons and Nerves: Building the Network_Remember_LO=2.3, APA 1.1
Pain-controlling chemicals in the body are called _____.

a) neural regulators

Incorrect. Not all neural regulators are endorphins.

b) histamines
c) androgens
d) endorphins

Correct. Endorphins are pain-controlling chemicals.

Topic: Neurons and Nerves: Building the Network
ANS: d, Remember the Facts, 1 - Easy, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
% correct 81 a= 3 b= 7 c= 8 d= 81 *r* = .42
APA=1.1

TB_02_53 Neurons and Nerves: Building the Network_Understand_LO=2.3, APA 1.1
Because they have similar chemical structures, morphine and heroin are able to lock into receptor sites for _____.

a) GABA

Incorrect. Opiates are not able to lock into GABA receptor sites.

b) serotonin

c) dopamine

d) endorphins

Correct. Endorphins are a natural substance that has the same effect as opiates.

Topic: Neurons and Nerves: Building the Network
ANS: d, Understand the Concepts, 3 - Difficult, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
APA=1.1

TB_02_54 Neurons and Nerves: Building the Network_Remember_LO=2.3, APA 1.1
Reuptake is _____.

a) a chemical that is released into the synaptic gap

Incorrect. Reuptake is a process.

b) a protein molecule on the dendrite or cell body of a neuron that will interact only with specific neurotransmitters

c) a process by which neurotransmitters are sucked back into the synaptic vesicles

Correct. This is the definition of reuptake.

d) a chemical that plays a role in learning and attention

Topic: Neurons and Nerves: Building the Network
ANS: c, Remember the Facts, 2 - Moderate, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
% correct 77 a= 7 b= 13 c= 77 d= 3 *r* = .41
APA=1.1

TB_02_55 Neurons and Nerves: Building the Network_Apply_LO=2.3, APA 1.1, 1.3
Isabella is putting mustard on her hot dog. She realizes she has put too much and sucks up some of it back into the squeeze bottle. This process is similar to:

a) the action potential.

b) receptor site bindings.

c) binding specificity.

Incorrect. Binding specificity refers to the fact that receptor sites are designed to receive only one specific neurotransmitter.

d) reuptake.

Correct. Recall take occurs when excess neurotransmitters are reabsorbed into the sending neuron.

Topic: Neurons and Nerves: Building the Network
ANS: d, Apply What You Know, 3 - Difficult, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
APA=1.1, 1.3

TB_02_56 Neurons and Nerves: Building the Network_Understand_LO=2.3, APA 1.1
How is acetylcholine removed from the synapse?

a) It is broken down by an enzyme.

Correct. It is broken down by an enzyme.

b) It is taken back up in the synapse.

Incorrect. It is broken down by an enzyme.

c) It dissipates in the surrounding body fluids.

d) Acetylcholine is one of the few neurotransmitters that is continually present in the synapse.

Topic: Neurons and Nerves: Building the Network
ANS: a, Understand the Concepts, 3 - Difficult, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
APA=1.1

An Overview of the Nervous System

Learning Objective 2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity.

TB_02_57 The Central Nervous System—The "Central Processing Unit"_Remember_LO=2.4, APA 1.1
The two main divisions of the nervous system are the _____ and _____.

a) brain; spinal cord

b) autonomic; somatic nervous systems

Incorrect. The autonomic and somatic nervous systems are divisions of the peripheral nervous system.

c) peripheral nervous system; central nervous system

Correct. These are the two main divisions of the nervous system.

d) glands; muscles

Topic: The Central Nervous System—The "Central Processing Unit"
ANS: c, Remember the Facts, 1 - Easy, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
% correct 73 a=8 b= 18 c= 73 d= 0 *r* = .42
% correct 68 a= 18 b= 13 c= 68 d= 0 *r* = .47
APA=1.1

TB_02_58 The Central Nervous System—The "Central Processing Unit"_Remember_LO=2.4, APA 1.1
The brain and spinal cord are two components of the _____.

a) central nervous system

Correct. The brain and spinal cord are two components of the central nervous system.

b) somatic nervous system

c) peripheral nervous system

Incorrect. The two components of the peripheral nervous system are the autonomic and somatic nervous systems.

d) autonomic nervous system

Topic: The Central Nervous System—The "Central Processing Unit"
ANS: a, Remember the Facts, 1 - Easy, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
% correct 100 a= 100 b= 0 c= 0 d= 0 *r* = .00
% correct 94 a= 94 b= 2 c= 1 d= 2 *r* = .39
APA=1.1

TB_02_59 The Central Nervous System—The "Central Processing Unit"_Remember_LO=2.4, APA 1.1
The central nervous system consists of _____.

a) the parasympathetic and sympathetic divisions

Incorrect. These are divisions of the autonomic nervous system.

b) the brain and spinal cord

Correct. The brain and spinal cord are the two most basic components of the central nervous system.

c) muscles and glands

d) sense organs and sensory neurons

Topic: The Central Nervous System—The "Central Processing Unit"
ANS: b, Remember the Facts, 2 - Moderate, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
% correct 77 a= 17 b= 77 c= 0 d= 6 *r* = .24
% correct 82 a= 16 b= 82 c= 1 d= 2 *r* = .32
APA=1.1

TB_02_60 The Central Nervous System—The "Central Processing Unit"_Remember_LO=2.4, APA 1.1
Which part of the nervous system takes the information received from the senses, makes sense out of it, makes decisions, and sends commands out to the muscles and the rest of the body?

a) spinal cord

Incorrect. The spinal cord carries messages to and from the body to the brain.

b) brain

Correct. That is the responsibility of the brain.

c) reflexes

d) interneurons

Topic: The Central Nervous System—The "Central Processing Unit"
ANS: b, Remember the Facts, 1 - Easy, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
% correct 85 a= 7 b= 85 c= 1 d= 7 *r* = .21
APA=1.1

TB_02_61 The Central Nervous System—The "Central Processing Unit"_Remember_LO=2.4, APA 1.1
The long bundle of neurons that carries messages to and from the body to the brain and is responsible for very fast, lifesaving reflexes is called the _____.

a) spinal cord

Correct. The spinal cord carries messages to and from the body to the brain.

b) brain

Incorrect. The brain receives messages from the spinal cord.

c) reflexes

d) interneurons

Topic: The Central Nervous System—The "Central Processing Unit"
ANS: a, Remember the Facts, 1 - Easy, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
% correct 89 a= 89 b= 0 c= 2 d= 9 *r* = .31
APA=1.1

TB_02_62 The Central Nervous System—The "Central Processing Unit"_Remember_LO=2.4, APA 1.1
Which of the following is a long bundle of neurons that functions as a carrier of messages to and from the brain to the body and is responsible for certain reflexes?

a) spinal cord

Correct. The spinal cord carries messages to and from the body to the brain.

b) cerebellum

c) somatic nervous system

Incorrect. The somatic nervous system carries information from the senses to the central nervous system (CNS) and from the CNS to voluntary muscles of the body.

d) amygdala

Topic: The Central Nervous System—The "Central Processing Unit"
ANS: a, Remember the Facts, 2 - Moderate, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
% correct 77 a= 77 b= 2 c= 19 d= 2 *r* = .29
APA=1.1

TB_02_63 The Central Nervous System—The "Central Processing Unit"_Remember_LO=2.4, APA 1.1
Which of the following are the three basic types of neurons?

a) reflexes, sensory neurons, motor neurons

Incorrect. Reflexes are not a type of neuron.

b) sensory neurons, motor neurons, stem cells

c) motor neurons, stem cells, reflexes

d) interneurons, sensory neurons, motor neurons

Correct. All of these are neurons.

Topic: The Central Nervous System—The "Central Processing Unit"
ANS: d, Remember the Facts, 1 - Easy, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
% correct 89 a= 3 b= 7 c= 0 d= 89 *r* = .36
% correct 79 a= 13 b= 8 c= 0 d= 79 *r* = .31
APA=1.1

TB_02_64 The Central Nervous System—The "Central Processing Unit"_Remember_LO=2.4, APA 1.1
Neurons that carry information from the senses to the spinal cord are called _____.

a) motor neurons

b) interneurons

Incorrect. Interneurons connect sensory neurons to the motor neurons.

c) sensory neurons

Correct. Sensory neurons carry information from the senses to the spinal cord.

d) reflexes

Topic: The Central Nervous System—The "Central Processing Unit"
ANS: c, Remember the Facts, 2 - Moderate, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
% correct 75 a= 19 b= 5 c= 75 d= 0 *r* = .32
% correct 80 a= 11 b= 9 c= 80 d= 1 *r* = .28
APA=1.1

TB_02_65 The Central Nervous System—The "Central Processing Unit"_Apply_LO=2.4, APA 1.1, 1.3
LaKeisha stepped on a piece of glass and quickly pulled her foot away from that sharp object. Which of the following are responsible for sending a message to the muscles in LaKeisha's foot, resulting in her pulling her foot away from the piece of glass?

a) motor neurons

Correct. Motor neurons carry messages from the central nervous system to the muscles of the body.

b) interneurons

Incorrect. Interneurons connect the sensory neurons to the motor neurons.

c) sensory neurons

d) reflexes

Topic: The Central Nervous System—The "Central Processing Unit"
ANS: a, Apply What You Know, 3 - Difficult, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
% correct 58 a= 58 b= 2 c= 18 d= 521 *r* = .27
APA=1.1, 1.3

TB_02_66 The Central Nervous System—The "Central Processing Unit"_Remember_LO=2.4, APA 1.1
Neurons that receive information from the sensory neurons and send commands to the muscles through the motor neurons are called _____.

a) motor neurons

Incorrect. Motor neurons carry messages from the central nervous system to the muscles of the body.

b) interneurons

Correct. Interneurons connect the sensory neurons to the motor neurons.

c) sensory neurons
d) reflexes

Topic: The Central Nervous System—The "Central Processing Unit"
ANS: b, Remember the Facts, 2 - Moderate, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
APA=1.1

TB_02_67 The Central Nervous System—The "Central Processing Unit"_Understand_LO=2.4, APA 1.1
Which of the following are responsible for acting as a facilitator of communication between neurons?

a) motor neurons

Incorrect. Motor neurons carry messages from the central nervous system to the muscles of the body.

b) interneurons

Correct. Interneurons connect the sensory neurons to the motor neurons.

c) sensory neurons
d) reflexes

Topic: The Central Nervous System—The "Central Processing Unit"
ANS: b, Understand the Concepts, 1 - Easy, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
% correct 80 a= 8 b= 80 c= 8 d= 3 *r* = .37
APA=1.1

TB_02_68 The Central Nervous System—The "Central Processing Unit"_Apply_LO=2.4, APA 1.1, 1.3
Mary put her hand on a hot stove. Which neuron is responsible for sending a pain message up her spinal column, where it would then enter into the main area of the cord?

a) motor neuron
b) interneuron

Incorrect. Sensory neurons carry information from the senses to the spinal cord.

c) sensory neuron

Correct. Sensory neurons carry information from the senses to the spinal cord.

d) reflex

Topic: The Central Nervous System—The "Central Processing Unit"
ANS: c, Apply What You Know, 1 - Easy, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
% correct 90 a= 5 b= 3 c= 90 d= 1 *r* = .27
APA=1.1, 1.3

TB_02_69 The Central Nervous System—The "Central Processing Unit"_Apply_LO=2.4, APA 1.1, 1.3
Cameron touches a hot iron and immediately pulls his hand away. His quick response occurs because _____.

a) the pain message goes up the spinal column to the central area of the spinal cord instead of going all the way to the brain

Correct. Pain messages are spinal reflexes and the response is automatic.

b) the brain has registered that pain is occurring and responds quickly

Incorrect. This type of pain message does not go all the way to the brain.

c) his glands have secreted chemical messengers called hormones
d) neurons in the spinal cord touch end to end to increase response speed

Topic: The Central Nervous System—The "Central Processing Unit"
ANS: a, Apply What You Know, 3 - Difficult, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
APA=1.1, 1.3

TB_02_70 The Central Nervous System—The "Central Processing Unit"_Understand_LO=2.4, APA 1.1, 1.3
Why do many reflexes, such as pulling your hand away from a hot iron, happen so quickly?

a) They involve the neurotransmitter GABA rather than dopamine.
b) The message involved does not have to go all the way to the brain.

Correct. The message goes to the central area of the spinal cord and not up to the brain.

c) The speed of processing is faster in the frontal lobes than in the occipital lobes.
d) The path that reflexes follow to the brain is direct and does not involve any neurotransmitters.

Incorrect. The message involved does not have to go all the way to the brain.

Topic: The Central Nervous System—The "Central Processing Unit"
ANS: b, Understand the Concepts, 3 - Difficult, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
% correct 49 a= 17 b= 49 c= 14 d= 21 *r* = .51
APA=1.1, 1.3

TB_02_71 The Central Nervous System—The "Central Processing Unit"_Apply_LO=2.4, APA 1.1, 1.3
Jack suffered a brain injury as a result of hitting his head while waterskiing. One of the problems that developed was that Jack could not pronounce certain words correctly for a long period of time until he had extensive speech therapy, but can now speak as he did before his accident. This is an example of the brain's _____, which allowed the structure and function of his brain cells to change to adjust to the trauma.

a) adaptology
b) stagnation
c) neuroplasticity

Correct. This allowed Jack's brain to adapt after the trauma.

d) reflex arc

Incorrect. Neuroplasticity accounts for Jack's brain to allow him to speak correctly despite damage.

Topic: The Central Nervous System—The "Central Processing Unit"
ANS: c, Apply What You Know, 2 - Moderate, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
APA=1.1, 1.3

TB_02_72 The Central Nervous System—The "Central Processing Unit"_Understand_LO=2.4, APA 1.1
Neuroplasticity is most evident in which of the following circumstances?

a) during the elderly years

Incorrect. As your authors point out, plasticity is higher during childhood than in later years.

b) when we learn something new or store new information

Correct. Learning or storing new information would cause the brain to change its structure slightly, which demonstrates plasticity.

d) when we are trying to undo previous pruning
c) when reuptake of excess neurotransmitters is taking place

Topic: The Central Nervous System—The "Central Processing Unit"
ANS: b, Understand the Concepts, 3 - Difficult, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
APA=1.1

Learning Objective 2.5 - Describe the role of the somatic and autonomic nervous systems

TB_02_73 The Peripheral Nervous System—Nerves on the Edge_Remember_LO=2.5, APA 1.1
Which statement is untrue about the peripheral nervous system (PNS)?

a) The PNS consists of the brain and spinal cord.

Correct. These are parts of the central nervous system (CNS).

b) The PNS consists of the nerves and neurons not in the central nervous system (CNS).

Incorrect. This is an accurate definition of the PNS.

c) The PNS allows the brain and spinal cord to coordinate with sensory systems.
d) The PNS allows the brain and spinal cord to coordinate with muscles and glands in the body.

Topic: The Peripheral Nervous System—Nerves on the Edge
ANS: a, Remember the Facts, 2 - Moderate, LO=2.5 - Describe the role of the somatic and autonomic nervous systems
APA=1.1

TB_02_74 The Peripheral Nervous System—Nerves on the Edge _Remember_LO=2.5, APA 1.1

The peripheral nervous system consists of _____.

a) all of the nerve cells that are not in the brain and spinal cord

Correct. The peripheral nervous system consists of all the nerve cells that are not in the brain and spinal cord.

b) all of the nerves in the brain and the spinal cord

Incorrect. The central nervous system consists of the brain and spinal cord.

c) the spinal cord and autonomic system

d) the brain and the autonomic system

Topic: The Peripheral Nervous System—Nerves on the Edge

ANS: a, Remember the Facts, 2 - Moderate, LO=2.5 - Describe the role of the somatic and autonomic nervous systems

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

APA=1.1

TB_02_75 The Peripheral Nervous System—Nerves on the Edge _Understand_LO=2.5, APA 1.1

The division of the nervous system that allows the brain and the spinal cord to communicate with the sensory systems of the eyes, ears, skin, and mouth, and allows the brain and spinal cord to control the muscles and glands of the body is called the _____.

a) peripheral nervous system

Correct. The peripheral nervous system allows the brain and spinal cord to communicate with the sensory systems and control the muscles and glands.

b) central nervous system

Incorrect. The peripheral nervous system enables the central nervous system, which consists of the brain and spinal cord, to communicate with the sensory systems and control the muscles and glands.

c) endocrine system

d) secondary nervous system

Topic: The Peripheral Nervous System—Nerves on the Edge

ANS: a, Understand the Concepts, 2 - Moderate, LO=2.5 - Describe the role of the somatic and autonomic nervous systems

% correct 69 a= 69 b= 22 c= 7 d= 1 *r* = .43

APA=1.1

TB_02_76 The Peripheral Nervous System—Nerves on the Edge_Remember_LO=2.5, APA 1.1

The peripheral nervous system consists of the _____ and _____ nervous systems.

a) autonomic; somatic

Correct. The peripheral nervous system consists of the autonomic and somatic nervous systems.

b) autonomic; sympathetic

c) parasympathetic; somatic

d) parasympathetic; sympathetic

Incorrect. These are the two divisions of the autonomic nervous system.

Topic: The Peripheral Nervous System—Nerves on the Edge

ANS: a, Remember the Facts, 3 - Difficult, LO=2.5 - Describe the role of the somatic and autonomic nervous systems

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

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

APA=1.1

TB_02_77 The Peripheral Nervous System—Nerves on the Edge_Remember_LO=2.5, APA 1.1

Voluntary muscles are controlled by the _____ nervous system.

a) somatic

Correct. The somatic nervous system controls voluntary muscles.

b) autonomic

Incorrect. The autonomic nervous system controls involuntary muscles.

c) sympathetic

d) parasympathetic

Topic: The Peripheral Nervous System—Nerves on the Edge
ANS: a, Remember the Facts, 2 - Moderate, LO=2.5 - Describe the role of the somatic and autonomic nervous systems
% correct 69 a= 69 b= 17 c=11 d= 3 *r* = .46
APA=1.1

TB_02_78 The Peripheral Nervous System—Nerves on the Edge_Remember_LO=2.5, APA 1.1
The subdivision of the peripheral nervous system that is made up of all nerves carrying messages from the senses to the central nervous system and all nerves carrying messages from the central nervous system to skeletal muscles is called the _____.

a) autonomic nervous system

Incorrect. The autonomic nervous system consists of nerves that control all of the involuntary muscles, organs, and glands.

b) parasympathetic nervous system
c) somatic nervous system

Correct. This describes the somatic nervous system.

d) central nervous system

Topic: The Peripheral Nervous System—Nerves on the Edge
ANS: c, Remember the Facts, 3 - Difficult, LO=2.5 - Describe the role of the somatic and autonomic nervous systems
% correct 59 a= 25 b= 13 c= 59 d= 3 *r* = .46
APA=1.1

TB_02_79 The Peripheral Nervous System—Nerves on the Edge_Remember_LO=2.5, APA 1.1
In the peripheral nervous system, _____ carry messages from the senses to the central nervous system.

a) autonomic nerves
b) sensory pathway neurons

Correct. Sensory pathway neurons carry messages from sense receptors.

c) motor pathway neurons

Incorrect. Motor pathway neurons travel from the central nervous system to the voluntary muscles.

d) autonomic neurons

Topic: The Peripheral Nervous System—Nerves on the Edge
ANS: b, Remember the Facts, 1 - Easy, LO=2.5 - Describe the role of the somatic and autonomic nervous systems
APA=1.1

TB_02_80 The Peripheral Nervous System—Nerves on the Edge _Apply_LO=2.5, APA 1.1, 1.3
Vladimir is typing on the computer keyboard. The motion of his fingers on the keys is probably being controlled by the _____.

a) autonomic nervous system
b) sensory pathway neurons

Incorrect. These neurons make up the nerves that come from the sensory organs.

c) motor pathway neurons

Correct. Movements of fingers are associated with motor pathway neurons, which control voluntary muscles.

d) autonomic neurons

Topic: The Peripheral Nervous System—Nerves on the Edge
ANS: c, Apply What You Know, 3 - Difficult, LO=2.5 - Describe the role of the somatic and autonomic nervous systems
APA=1.1, 1.3

TB_02_81 The Peripheral Nervous System—Nerves on the Edge _Understand_LO=2.5, APA 1.1
Every deliberate action you make, such as pedaling a bike, walking, scratching, or smelling a flower, involves neurons in the _____ nervous system.

a) sympathetic
b) somatic

Correct. The somatic nervous system controls voluntary muscle movement.

c) parasympathetic

d) autonomic

Incorrect. The autonomic nervous system consists of nerves that control all of the involuntary muscles, organs, and glands.

Topic: The Peripheral Nervous System—Nerves on the Edge

ANS: b, Understand the Concepts, 3 - Difficult, LO=2.5 - Describe the role of the somatic and autonomic nervous systems

% correct 50 a= 12 b= 50 c= 12 d= 25 *r* = .23

% correct 60 a= 14 b= 60 c= 11 d= 14 *r* = .21

APA=1.1

TB_02_82 The Peripheral Nervous System—Nerves on the Edge _Apply_LO=2.5, APA 1.1, 1.3

As she walks out of the living room, Gloriann turns out the light. In this example, Gloriann's _____ is active.

a) sympathetic nervous system

b) parasympathetic nervous system

c) autonomic nervous system

Incorrect. Turning out the light requires voluntary muscle movement.

d) somatic nervous system

Correct. Turning out the light requires voluntary muscle movement.

Topic: The Peripheral Nervous System—Nerves on the Edge

ANS: d, Apply What You Know, 3 - Difficult, LO=2.5 - Describe the role of the somatic and autonomic nervous systems

% correct 48 a= 8 b= 14 c= 30 d= 48 *r* = .42

APA=1.1, 1.3

TB_02_83 The Peripheral Nervous System—Nerves on the Edge_Remember_LO=2.5, APA 1.1

Involuntary muscles are controlled by the _____ nervous system.

a) somatic

Incorrect. The somatic nervous system controls voluntary muscles.

b) autonomic

Correct. The autonomic nervous system controls involuntary muscles like the heart, stomach, and intestines.

c) sympathetic

d) parasympathetic

Topic: The Peripheral Nervous System—Nerves on the Edge

ANS: b, Remember the Facts, 2 - Moderate, LO=2.5 - Describe the role of the somatic and autonomic nervous systems

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

APA=1.1

TB_02_84 The Peripheral Nervous System—Nerves on the Edge_Remember_LO=2.5, APA 1.1

The subdivision of the peripheral nervous system that consists of nerves that control all of the involuntary muscles, organs, and glands is called the _____ nervous system.

a) somatic

Incorrect. The somatic nervous system controls voluntary muscles.

b) autonomic

Correct. The autonomic nervous system controls involuntary muscles and glands.

c) sympathetic

d) parasympathetic

Topic: The Peripheral Nervous System—Nerves on the Edge

ANS: b, Remember the Facts, 2 - Moderate, LO=2.5 - Describe the role of the somatic and autonomic nervous systems

% correct 71 a= 10 b= 71 c= 10 d= 7 *r* = .26

APA=1.1

TB_02_85 The Peripheral Nervous System—Nerves on the Edge _Apply_LO=2.5, APA 1.1, 1.3
When you see someone you have a crush on and your heart pounds, your hands get sweaty, and your cheeks feel hot, your _____ is/are active.

a) skeletal nervous system
b) spinal reflexes
c) autonomic nervous system

Correct. The autonomic nervous system controls involuntary muscles and glands.

d) somatic nervous system

Incorrect. The somatic nervous system controls voluntary muscles.

Topic: The Peripheral Nervous System—Nerves on the Edge
ANS: c, Apply What You Know, 2 - Moderate, LO=2.5 - Describe the role of the somatic and autonomic nervous systems
APA=1.1, 1.3

TB_02_86 The Peripheral Nervous System—Nerves on the Edge_Remember_LO=2.5, APA 1.1
The autonomic nervous system has two divisions: the _____ and the _____.

a) central; peripheral

Incorrect. The two divisions of the autonomic nervous system are the sympathetic and parasympathetic nervous systems.

b) sympathetic; parasympathetic

Correct. These are the divisions of the autonomic nervous system.

c) receptors; effectors
d) limbic; endocrine

Topic: The Peripheral Nervous System—Nerves on the Edge
ANS: b, Remember the Facts, 1 - Easy, LO=2.5 - Describe the role of the somatic and autonomic nervous systems
% correct 96 a= 4 b= 96 c= 0 d= 0 *r* = .19
% correct 91 a= 6 b= 91 c= 1 d= 3 *r* = .22
APA=1.1

TB_02_87 The Peripheral Nervous System—Nerves on the Edge_Remember_LO=2.5, APA 1.1
Which component of the nervous system mobilizes the body in times of stress?

a) central
b) somatic
c) sympathetic

Correct. The sympathetic nervous system mobilizes the body in times of stress.

d) parasympathetic

Incorrect. The parasympathetic nervous system restores the body to normal functioning after arousal.

Topic: The Peripheral Nervous System—Nerves on the Edge
ANS: c, Remember the Facts, 2 - Moderate, LO=2.5 - Describe the role of the somatic and autonomic nervous systems
% correct 60 a= 8 b= 12 c= 60 d= 20 *r* = .37
% correct 69 a= 3 b= 10 c= 69 d= 17 *r* = .47
APA=1.1

TB_02_88 The Peripheral Nervous System—Nerves on the Edge_Remember_LO=2.5, APA 1.1
The part of the autonomic nervous system that is responsible for reacting to stressful events and bodily arousal is called the _____ nervous system.

a) central
b) somatic
c) sympathetic

Correct. The sympathetic nervous system is responsible for reacting to stressful events and bodily arousal.

d) parasympathetic

Incorrect. The parasympathetic nervous system restores the body to normal functioning after arousal.
Topic: The Peripheral Nervous System—Nerves on the Edge
ANS: c, Remember the Facts, 2 - Moderate, LO=2.5 - Describe the role of the somatic and autonomic nervous systems
% correct 66 a= 5 b= 9 c= 66 d= 19 *r* = .40
% correct 79 a= 1 b= 5 c= 79 d= 14 *r* = .40
APA=1.1

TB_02_89 The Peripheral Nervous System—Nerves on the Edge _Apply_LO=2.5, APA 1.1, 1.3
As Molly is walking across campus, a car swerves toward her. Her heart races and sweat breaks out as she jumps out of harm's way. This mobilization of energy is due to the action of Molly's _____ nervous system.

a) somatic
b) skeletal
c) parasympathetic

Incorrect. The parasympathetic nervous system restores the body to normal functioning after arousal.

d) sympathetic

Correct. The sympathetic nervous system is responsible for reacting to stressful events and bodily arousal.
Topic: The Peripheral Nervous System—Nerves on the Edge
ANS: d, Apply What You Know, 2 - Moderate, LO=2.5 - Describe the role of the somatic and autonomic nervous systems
% correct 73 a= 11 b= 0 c= 16 d= 73 *r* = .48
% correct 81 a= 11 b= 0 c= 9 d= 81 *r* = .51
APA=1.1, 1.3

TB_02_90 The Peripheral Nervous System—Nerves on the Edge_Remember_LO=2.5, APA 1.1
The branch of the autonomic nervous system that restores the body to normal functioning after arousal and is responsible for day-to-day functioning of the organs and glands is called the _____.

a) spinal cord
b) somatic nervous system
c) sympathetic nervous system

Incorrect. The sympathetic nervous system is responsible for reacting to stressful events and bodily arousal.

d) parasympathetic nervous system

Correct. The parasympathetic nervous system restores the body to normal functioning after arousal.
Topic: The Peripheral Nervous System—Nerves on the Edge
ANS: d, Remember the Facts, 2 - Moderate, LO=2.5 - Describe the role of the somatic and autonomic nervous systems
% correct 66 a= 2 b= 9 c= 23 d= 66 *r* = .37
APA=1.1

TB_02_91 The Peripheral Nervous System—Nerves on the Edge _Apply_LO=2.5, APA 1.1, 1.3
Malcolm is studying alone in his room late at night when he hears a loud noise downstairs. His heartbeat increases significantly and his breathing becomes shallow. He wonders if a burglar has entered the house and decides to investigate. When he gets downstairs, he discovers his cat has knocked over a plant stand. His body begins to relax and return to normal. Which part of his nervous system is responsible for returning Malcolm to a normal state?

a) spinal cord
b) somatic nervous system
c) sympathetic nervous system

Incorrect. The sympathetic nervous system mobilizes the body in times of stress.

d) parasympathetic nervous system

Correct. The parasympathetic nervous system restores the body to normal functioning after arousal.
Topic: The Peripheral Nervous System—Nerves on the Edge
ANS: d, Apply What You Know, 2 - Moderate, LO=2.5 - Describe the role of the somatic and autonomic nervous systems
APA=1.1, 1.3

Distant Connections: The Endocrine Glands

Learning Objective 2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior?

TB_02_92 Distant Connections: The Endocrine Glands_Remember_LO=2.6, APA 1.1
Hormones are chemicals that are secreted and go directly into _____.

a) the bloodstream

Correct. Hormones are secreted by endocrine glands and go into the bloodstream.

b) specific organs
c) nerve endings
d) the brain

Incorrect. Hormones go directly into the bloodstream.

Topic: Distant Connections: The Endocrine Glands
ANS: a, Remember the Facts, 3 - Difficult, LO=2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior?
% correct 59 a= 59 b= 12 c= 8 d= 21 *r* = .42
APA=1.1

TB_02_93 Distant Connections: The Endocrine Glands_Remember_LO=2.6, APA 1.1
Endocrine glands _____.

a) secrete hormones directly into the bloodstream

Correct. Endocrine glands do secrete hormones.

b) are chemicals released into the bloodstream

Incorrect. Glands are not chemicals; they are organs that secrete chemicals.

c) are an extensive network of specialized cells
d) are a thin layer of cells coating the axons

Topic: Distant Connections: The Endocrine Glands
ANS: a, Remember the Facts, 1 - Easy, LO=2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior?
% correct 91 a= 91 b= 5 c= 2 d= 2 *r* = .56
APA=1.1

TB_02_94 Distant Connections: The Endocrine Glands_Remember_LO=2.6, APA 1.1
Hormones are _____.

a) the female gonads
b) chemicals released into the bloodstream by the endocrine glands

Correct. This is the definition of hormones.

c) chemicals found in the synaptic vesicles, which when released have an effect on the next cell

Incorrect. This is the definition of neurotransmitters, not hormones.

d) the male gonads

Topic: Distant Connections: The Endocrine Glands
ANS: b, Remember the Facts, 1 - Easy, LO=2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior?
APA=1.1

TB_02_95 Distant Connections: The Endocrine Glands_Remember_LO=2.6, APA 1.1
Which endocrine gland controls all of the other endocrine glands?

a) thyroid

Incorrect. The thyroid gland does not control other endocrine glands.

b) adrenal
c) thymus
d) pituitary

Correct. The pituitary gland controls all other endocrine glands.
Topic: Distant Connections: The Endocrine Glands
ANS: d, Remember the Facts, 1 - Easy, LO=2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior?
APA=1.1

TB_02_96 Distant Connections: The Endocrine Glands_Understand_LO=2.6, APA 1.1
The idea that the pituitary gland is the "master gland":

a) is completely accurate and appropriate.

Incorrect. The pituitary gland is controlled by the hypothalamus, so to suggest that calling it the master gland is completely accurate is something of a misnomer.

b) is completely inaccurate since it doesn't control any other glands or related structures.
c) is true; yet, it is still controlled by the brain.

Correct. The pituitary gland can be thought of as the master of the endocrine system, but it is still controlled by the hypothalamus in the brain.

d) is a matter of debate, since many other researchers refer to the adrenal gland as the "master gland."

Topic: Distant Connections: The Endocrine Glands
ANS: c, Understand the Concepts, 3 - Difficult, LO=2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior?
APA=1.1

TB_02_97 Distant Connections: The Endocrine Glands_Remember_LO=2.6, APA 1.1
The hormone released by the pineal gland that reduces body temperature and prepares you for sleep is _____.

a) melatonin

Correct. The pineal gland secretes melatonin.

b) DHEA
c) parathormone
d) thyroxin

Incorrect. The thyroid secretes thyroxin, which regulates metabolism.

Topic: Distant Connections: The Endocrine Glands
ANS: a, Remember the Facts, 1 - Easy, LO=2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior?
APA=1.1

TB_02_98 Distant Connections: The Endocrine Glands_Apply_LO=2.6, APA 1.1, 1.3
Tim is overweight. His physician has decided to test him to see if there is a problem with the regulation of his _____.

a) adrenal glands

Incorrect. The adrenal glands have nothing to do with metabolism. They secrete sex hormones and hormones that regulate salt intake.

b) thymus
c) thyroid

Correct. The thyroid gland regulates metabolism.

d) pancreas

Topic: Distant Connections: The Endocrine Glands
ANS: c, Apply What You Know, 3 - Difficult, LO=2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior?
APA=1.1, 1.3

TB_02_99 Distant Connections: The Endocrine Glands_Apply_LO=2.6, APA 1.1, 1.3
Denise just received the results of a complete physical that found her body is not producing enough insulin. Which of the following endocrine glands is affecting her body's ability to produce insulin?

a) adrenal

Incorrect. The adrenal glands have nothing to do with insulin. They secrete sex hormones and hormones that regulate salt intake.

b) thymus
c) thyroid
d) pancreas

Correct. The pancreas controls the level of blood sugar in the body.

Topic: Distant Connections: The Endocrine Glands
ANS: d, Apply What You Know, 3 - Difficult, LO=2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior?
APA=1.1, 1.3

TB_02_100 Distant Connections: The Endocrine Glands_Remember_LO=2.6, APA 1.1
The sex glands, which secrete hormones that regulate sexual development and behavior as well as reproduction, are called _____.

a) the pancreas
b) the gonads

Correct. Gonads are sex glands.

c) cortisol

Incorrect. Cortisol is a hormone that is released when the body experiences stress.

d) the hypothalamus

Topic: Distant Connections: The Endocrine Glands
ANS: b, Remember the Facts, 1 - Easy, LO=2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior?
% correct 87 a= 1 b= 87 c= 3 d= 9 *r* = .50
APA=1.1

TB_02_101 Distant Connections: The Endocrine Glands_Remember_LO=2.6, APA 1.1
The _____, located on the top of the kidneys, secrete(s) hormones that regulate salt intake, control stress reactions, and provide a secondary source of sex hormones affecting the sexual changes that occur during adolescence.

a) adrenal glands

Correct. The adrenal glands secrete sex hormones and hormones that regulate salt intake.

b) thymus gland
c) thyroid gland
d) gonads

Incorrect. The gonads only secrete sex hormones.

Topic: Distant Connections: The Endocrine Glands
ANS: a, Remember the Facts, 1 - Easy, LO=2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior?
APA=1.1

TB_02_102 Distant Connections: The Endocrine Glands_Apply_LO=2.6, APA 1.1, 1.3
Joe is very anxious over an upcoming exam. Consequently, his adrenal glands will probably produce _____.

a) more testosterone
b) less estrogen

Incorrect. Nothing about Joe's circumstance would result in a change in production of estrogen.

c) more cortisol

Correct. Stressful or tense situations cause the adrenal glands to produce more cortisol in the adrenal glands.

d) less cortisol

Topic: Distant Connections: The Endocrine Glands
ANS: c, Apply What You Know, 3 - Difficult, LO=2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior?
APA=1.1, 1.3

Learning Objective 2.7 - Describe how the autonomic nervous system and body are impacted by stress.

TB_02_103 Distant Connections: The Endocrine Glands_Remember_LO=2.7, APA 1.1

Which part of the nervous system reacts when the human body is subjected to stress?

a) parasympathetic

Incorrect. The parasympathetic nervous system returns the body to normal after a stressful period.

b) somatic

c) sympathetic

Correct. The sympathetic nervous system causes heart rate to increase, digestion to slow down, and energy to be sent to the muscles to help deal with whatever action the stressful situation requires.

d) central

Topic: Distant Connections: The Endocrine Glands

ANS: c, Remember the Facts, 1 - Easy, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress

% correct 81 a= 12 b= 4 c= 81 d= 1 *r* = .52

APA=1.1

TB_02_104 Distant Connections: The Endocrine Glands_Understand_LO=2.7, APA 1.1

Which parts of the nervous system are associated with the general adaptation syndrome?

a) somatic and parasympathetic

Incorrect. The somatic nervous system does not play a role in stress reactions.

b) autonomic and sympathetic

c) sympathetic and parasympathetic

Correct. The sympathetic nervous and the parasympathetic systems are associated with the general adaptation syndrome.

d) central and somatic

Topic: Distant Connections: The Endocrine Glands

ANS: c, Understand the Concepts, 3 - Difficult, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress

% correct 38 a= 3 b= 38 c= 38 d= 30 *r* = .21

APA=1.1

TB_02_105 Distant Connections: The Endocrine Glands_Apply_LO=2.7, APA 1.1, 1.3

When the teacher was handing out this test, you noticed that your respiration rate and heartbeat increased, your palms got sweaty, and your hand shook a little. Your pretest behaviors were triggered by the _____. Upon completion of the exam, your body returned to its normal state by way of the _____.

a) parasympathetic nervous system; sympathetic nervous system

Incorrect. The parasympathetic nervous system works to bring the body back to a normal state, and the sympathetic nervous system becomes activated during times of stress.

b) sympathetic nervous system; parasympathetic nervous system

Correct. The sympathetic nervous system becomes activated during times of stress, and once the stressful period has ended, the parasympathetic system works to bring the body back to a normal state.

c) somatic nervous system; autonomic nervous system

d) autonomic nervous system; somatic nervous system

Topic: Distant Connections: The Endocrine Glands

ANS: b, Apply What You Know, 2 - Moderate, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress

% correct 64 a= 21 b= 64 c= 11 d= 4 *r* = .42

APA=1.1, 1.3

TB_02_106 Distant Connections: The Endocrine Glands_Remember_LO=2.7, APA 1.2

Which researcher is credited with proposing the general adaptation syndrome?

a) Selye

Correct. Hans Selye proposed the general adaptation syndrome.

b) Berkowitz

c) Holmes and Rahe

Incorrect. Holmes and Rahe developed the Social Readjustment Rating Scale. Selye proposed the general adaptation syndrome.

d) Lazarus
Topic: Distant Connections: The Endocrine Glands
ANS: a, Remember the Facts, 1 - Easy, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress
% correct 85 a= 85 b= 7 c= 2 d= 7 *r* = .23
APA=1.2

TB_02_107 Distant Connections: The Endocrine Glands_Remember_LO=2.7, APA 1.1
During the alarm stage of the general adaptation syndrome, _____.
a) the central and somatic systems are activated
b) synaptic activity and the somatic nervous system activate to send messages from the CNS to muscles
c) the sympathetic nervous system is activated and adrenal glands release hormones
Correct. During the alarm stage, the sympathetic nervous system becomes activated.
d) neurotransmitter levels and the central nervous system are activated
Incorrect. The sympathetic nervous system is activated during the alarm stage.
Topic: Distant Connections: The Endocrine Glands
ANS: c, Remember the Facts, 2 - Moderate, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress
% correct 82 a= 8 b= 5 c= 82 d= 5 *r* = .42
% correct 85 a= 6 b= 8 c= 85 d= 2 *r* = .31
APA=1.1

TB_02_108 Distant Connections: The Endocrine Glands_Remember_LO=2.7, APA 1.1
During the alarm stage of the general adaptation syndrome, all of the following EXCEPT _____ are reactions that can be seen.
a) headaches
b) nausea
c) fever
Incorrect. The stimulation of the sympathetic nervous system can induce a fever.
d) hemorrhaging
Correct. The stimulation of the sympathetic nervous system can cause headaches, nausea, or fevers, but hemorrhaging is not an associated physical response.
Topic: Distant Connections: The Endocrine Glands
ANS: d, Remember the Facts, 1 - Easy, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress
APA=1.1

TB_02_109 Distant Connections: The Endocrine Glands_Apply_LO=2.7, APA 1.1, 1.3
Saadat is walking to the front of the classroom in preparation for his class presentation. He notices his heart starts to beat fast, his palms are sweaty, and he has a general sense of increase in energy. According to the general adaptation syndrome, which phase of the stress response is he in?
a) alarm phase
Correct. This initial reaction to the stressful situation is called the alarm phase.
b) adaptation phase
c) reactive phase
Incorrect. There is no reactive phase in the general adaptation syndrome.
d) muscle preparation phase
Topic: Distant Connections: The Endocrine Glands
ANS: a, Apply What You Know, 1 - Easy, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress
APA=1.1, 1.3

TB_02_110 Distant Connections: The Endocrine Glands_Apply_LO=2.7, APA 1.1, 1.3
Adelaida hears a rattling sound as she hikes through the desert. Her muscles tense and her blood pressure rises.

According to Hans Selye, she is in the _____ phase.

a) chronic stress

b) alarm

Correct. In the alarm phase, the sympathetic nervous system responds to the threatening sound by activating and causing the adrenal glands to release hormones that increase heart rate and blood pressure.

c) exhaustion

d) resistance

Incorrect. The resistance phase would follow the alarm phase, which is the initial response to the threatening sound.

Topic: Distant Connections: The Endocrine Glands

ANS: b, Apply What You Know, 2 - Moderate, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress

% correct 94 a= 4 b= 94 c= 2 d= 0 *r* = .52

APA=1.1, 1.3

TB_02_111 Distant Connections: The Endocrine Glands_Remember_LO=2.7, APA 1.1

What is the correct sequence of stages in the general adaptation syndrome?

a) resistance, alarm, exhaustion

Incorrect. The alarm stage comes before the resistance stage in the general adaptation syndrome.

b) exhaustion, resistance, alarm

c) alarm, exhaustion, resistance

d) alarm, resistance, exhaustion

Correct. The correct sequence of stages in the general adaptation syndrome is alarm, resistance, exhaustion.

Topic: Distant Connections: The Endocrine Glands

ANS: d, Remember the Facts, 1 - Easy, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress

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

APA=1.1

TB_02_112 Distant Connections: The Endocrine Glands_Remember_LO=2.7, APA 1.2

According to Hans Selye, resistance to stress is lowest at the _____ stage of the general adaptation syndrome.

a) alarm

b) resistance

c) exhaustion

Correct. The third stage of the general adaptation syndrome is exhaustion, during which our resistance to stress is lowest.

d) collapse

Incorrect. This is not a stage of the general adaptation syndrome model.

Topic: Distant Connections: The Endocrine Glands

ANS: c, Remember the Facts, 2 - Moderate, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress

APA=1.2

TB_02_113 Distant Connections: The Endocrine Glands_Remember_LO=2.7, APA 1.1

A person in the _____ stage of the general adaptation syndrome may feel better, even though he or she continues to secrete hormones to help the body fight a stressor.

a) alarm

b) resistance

Correct. During the resistance stage, a person may feel better, even though he or she continues to secrete hormones to help the body fight a stressor.

c) exhaustion

Incorrect. During the exhaustion stage, the body's resources are so depleted that stress-related disease can develop.

d) termination

Topic: Distant Connections: The Endocrine Glands

ANS: b, Remember the Facts, 1 - Easy, LO=2.7 - Describe how the autonomic nervous system and body are

impacted by stress
APA=1.1

TB_02_114 Distant Connections: The Endocrine Glands_Remember_LO=2.7, APA 1.1
In which stage of the general adaptation syndrome has the body reached the limits of its ability to adapt to stress, which may result in the development of stress-related diseases?

a) alarm
b) collapse
c) exhaustion

Correct. During the exhaustion stage, the body has reached its limit.

d) resistance

Incorrect. During the resistance stage, the body fights off the stressor until its resources give out.

Topic: Distant Connections: The Endocrine Glands
ANS: c, Remember the Facts, 1 - Easy, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress
% correct 85 a= 3 b= 7 c= 85 d= 5 *r* = .19
APA=1.1

TB_02_115 Distant Connections: The Endocrine Glands_Remember_LO=2.7, APA 1.1
According to Selye, some people may develop illnesses such as high blood pressure or a weakened immune system during the _____ stage of the general adaptation syndrome.

a) alarm
b) collapse
c) exhaustion

Correct. During the exhaustion stage, the body's resources are so depleted that stress-related diseases can develop.

d) resistance

Incorrect. During the resistance stage, the body uses its resources to fight off the stressor. It is not until the next stage, exhaustion, that bodily resources are so depleted that stress-related diseases can develop.

Topic: Distant Connections: The Endocrine Glands
ANS: c, Remember the Facts, 2 - Moderate, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress
% correct 77 a= 6 b= 0 c= 77 d= 17 *r* = .18
% correct 65 a= 8 b=2 c= 65 d= 2 *r* = .27
APA=1.1

TB_02_116 Distant Connections: The Endocrine Glands_Apply_LO=2.7, APA 1.2, 1.3
For the past six months, Dahlia's job has been extremely stressful, but she doesn't feel that she can quit because she needs the money for tuition. Dahlia has been having chronic headaches and is behind in all of her classes. According to Hans Selye, Dahlia is in the _____ stage of the general adaptation syndrome.

a) alarm
b) collapse
c) exhaustion

Correct. Dahlia has experienced prolonged stress, and her bodily resources are so depleted that stress-related diseases, such as chronic headaches, can develop.

d) resistance

Incorrect. During the resistance stage, the body uses its resources to fight off the stressor. It is not until the next stage, exhaustion, that bodily resources are so depleted that stress-related diseases, such as chronic headaches, can develop.

Topic: Distant Connections: The Endocrine Glands
ANS: c, Apply What You Know, 2 - Moderate, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress
APA=1.2, 1.3

TB_02_117 Distant Connections: The Endocrine Glands_Remember_LO=2.7, APA 1.1

The system of cells, organs, and chemicals of the body that responds to attacks from diseases and injuries is called the _____.

a) immune system

Correct. The immune system is defined as the system of cells, organs, and chemicals of the body that responds to attacks from diseases, infections, and injuries.

b) endocrine system

Incorrect. The endocrine system is made up of glands that secrete chemicals; it is not involved in the immune response.

c) sympathetic nervous system

d) respiratory system

Topic: Distant Connections: The Endocrine Glands
ANS: a, Remember the Facts, 1 - Easy, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress
% correct 100 a= 100 b= 0 c= 0 d= 0 *r* = .00
APA=1.1

TB_02_118 Distant Connections: The Endocrine Glands_Remember_LO=2.7, APA 1.1
The field of _____ studies the effects of psychological factors such as stress, emotions, thinking, and behavior on the immune system.

a) social psychology

Incorrect. Social psychology is concerned with how the presence of others influences the thoughts, feelings, and behaviors of individuals.

b) organic medicine

c) psychoneuroimmunology

Correct. Psychoneuroimmunology is concerned with the effects of stress on the immune system.

d) interactive psychology

Topic: Distant Connections: The Endocrine Glands
ANS: c, Remember the Facts, 1 - Easy, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress
% correct 95 a= 2 b= 2 c= 95 d= 1 *r* = .34
APA=1.1

TB_02_119 Distant Connections: The Endocrine Glands_Understand_LO=2.7, APA 1.1, 1.3
People living under stressful conditions tend to get sick more often than they would otherwise. How do researchers in psychoneuroimmunology explain this phenomenon?

a) The stress response reduces immune system functioning, thus making us more vulnerable to diseases.

Correct. Researchers in psychoneuroimmunology believe that the stress response reduces immune system functioning, thus making us more vulnerable to diseases.

b) The stress response in the long run leads to a lowering of the heart rate, which makes the heart inefficient.

c) The stress response makes muscles stronger, which places a greater burden on the heart and respiratory systems.

d) The body tends to adapt to the constant call for the stress response and, thus, future responses are not as strong as before.

Incorrect. The body's future responses to stress tend to be just as strong as past ones.

Topic: Distant Connections: The Endocrine Glands
ANS: a, Understand the Concepts, 2 - Moderate, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress
% correct 94 a= 94 b= 0 c= 0 d= 6 *r* = .21
APA=1.1, 1.3

TB_02_120 Distant Connections: The Endocrine Glands_Understand_LO=2.7, APA 1.1
Which of the following statements best encapsulates the relationship between stress and physical illness according to psychoneuroimmunologists?

a) Stress compromises the body's immune system, leaving a person vulnerable to illness.

Correct. While stress has not been found to directly cause illness, it does appear to rob the body of its ability to fight illness effectively.

b) Stress increases the production of natural killer cells, which causes cell death and leads to illness.

Incorrect. Stress reduces the production of natural killer cells, which your body needs to fight off viruses and tumor cells.

c) Stress causes high blood pressure, heart disease, and cancer.

d) Stress has no direct relationship to physical illness, though physicians tell us that these things are related so that we will be more willing to take unnecessary medications.

Topic: Distant Connections: The Endocrine Glands
ANS: a, Understand the Concepts, 3 - Difficult, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress
APA=1.1

TB_02_121 Distant Connections: The Endocrine Glands_Remember_LO=2.7, APA 1.1
In a recent study, researchers questioned middle-aged men about stress, diet, and lifestyle factors. They were also examined for four biological risk factors for heart disease including obesity, high blood sugar, high triglycerides, and low levels of HDL. As a result of this study, which of the following were strongly linked to the four biological risk factors?

a) The more stress these men were exposed to, the more likely they were to have these risk factors.

Correct. Stress contributes to obesity, high blood sugar, high triglycerides, and low levels of HDL.

b) The less stress these men were exposed to, the more likely they were to have these risk factors.

Incorrect. Stress contributes to obesity, high blood sugar, high triglycerides, and low levels of HDL.

c) The more stress these men were exposed to, the less likely they were to have these risk factors.

d) The less stress these men were exposed to, the less likely they were to have these risk factors.

Topic: Distant Connections: The Endocrine Glands
ANS: a, Remember the Facts, 2 - Moderate, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress
APA=1.1

TB_02_122 Distant Connections: The Endocrine Glands_Understand_LO=2.7, APA 1.1
Stress has been shown to put people at a higher risk for_____.

a) unplanned pregnancy

b) heart attack and stroke

Correct. Stress is linked with risk for heart attacks and stroke.

c) promotions at work

d) schizophrenia

Incorrect. Stress is linked with risk for heart attack and stroke but not for schizophrenia.

Topic: Distant Connections: The Endocrine Glands
ANS: b, Understand the Concepts, 1 - Easy, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress
APA=1.1

TB_02_123 Distant Connections: The Endocrine Glands_Understand_LO=2.7, APA 1.1
Prolonged stress has been shown to _____ cancer.

a) decrease vulnerability to

b) be unrelated to one's vulnerability to

c) increase vulnerability to

Correct. Stress has shown to depress the release of natural killer cells making unchecked growth for cancer more likely.

d) cause

Incorrect. Stress has shown to depress the release of natural killer cells, making unchecked growth for cancer more likely.

Topic: Distant Connections: The Endocrine Glands
ANS: C, Understand the Concepts, 2 - Moderate, LO=2.7 - Describe how the autonomic nervous system and

body are impacted by stress
APA=1.1

Learning Objective 2.8 - Describe how lesioning studies and brain stimulation are used to study the brain.

TB_02_124 Looking Inside the Living Brain_Remember_LO=2.8, APA 1.1
Insertion into the brain of a thin insulated wire through which an electrical current is sent that destroys the brain cells at the tip of the wire is called _____.

a) lesioning

Correct. Lesioning destroys brain cells.

b) ESB

Incorrect. ESB stimulates brain cells.

c) EEG

d) CT scanning

Topic: Looking Inside the Living Brain
ANS: a, Remember the Facts, 1 - Easy, LO=2.8 - Describe how lesioning studies and brain stimulation are used to study the brain
APA=1.1

TB_02_125 Looking Inside the Living Brain_Understand_LO=2.8, APA 2.4
In order to study parts of an animal's brain, researchers may sometimes deliberately damage a part of the brain. They accomplish this by placing into the brain a thin insulated wire through which they send an electrical current that destroys the brain cells at the tip of the wire. This technique is called _____.

a) lesioning

Correct. Lesioning destroys brain cells.

b) ESB

Incorrect. ESB stimulates brain cells.

c) EEG

d) CT scan

Topic: Looking Inside the Living Brain
ANS: a, Understand the Concepts, 2 - Moderate, LO=2.8 - Describe how lesioning studies and brain stimulation are used to study the brain
APA=2.4

TB_02_126 Looking Inside the Living Brain_Remember_LO=2.8, APA 2.4
Which of the following techniques involves applying pulses to the cortex using special copper wire coils that are positioned over the head?

a) transcranial magnetic stimulation

Correct. This is a brain stimulation technique that is noninvasive.

b) deep brain stimulation

c) lesioning techniques

Incorrect. Lesioning involves selective destruction of brain areas

d) positron emission tomography

Topic: Looking Inside the Living Brain
ANS: a, Remember the Facts, 1 - Easy, LO=2.8 - Describe how lesioning studies and brain stimulation are used to study the brain
APA=2.4

Learning Objective 2.9 - Describe how neuroimaging techniques can provide information about the brain's structure and function.

TB_02_127 Looking Inside the Living Brain_Remember_LO=2.9, APA 2.4
A brain-imaging method that takes computer-controlled X-rays of the brain is called _____.

a) electroencephalography (EEG)

b) magnetic resonance imaging (MRI)

Incorrect. MRI is a brain-imaging method using radio waves and magnetic fields of the body.

c) positron emission tomography (PET)

d) computed tomography (CT)

Correct. CT scans take computer-controlled X-rays of the brain.

Topic: Looking Inside the Living Brain

ANS: d, Remember the Facts, 3 - Difficult, LO=2.9 - Describe how neuroimaging techniques can provide information about the brain's structure and function

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

APA=2.4

TB_02_128 Looking Inside the Living Brain_Apply_LO=2.9, APA 2.4

Ali is in the hospital about to undergo a brain-imaging process that involves taking many X-rays from different angles aided by the use of a computer. What type of imaging technique is being used?

a) electroencephalography (EEG)

b) magnetic resonance imaging (MRI)

Incorrect. MRI is a brain-imaging method using radio waves and magnetic fields of the body.

c) positron-emission tomography (PET)

d) computed tomography (CT)

Correct. CT scans take computer-controlled X-rays of the brain.

Topic: Looking Inside the Living Brain

ANS: d, Apply What You Know, 3 - Difficult, LO=2.9 - Describe how neuroimaging techniques can provide information about the brain's structure and function

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

APA=2.4

TB_02_129 Looking Inside the Living Brain_Apply_LO=2.9, APA 2.4

If Mindy's doctor has taken a series of images of her brain using X-rays, then she has likely had a(n) _____.

a) EEG

Incorrect. An electroencephalogram is a graphical representation of the electrical activity in the brain.

b) MRI

c) CT

Correct. CT scans use x-rays to create such images.

d) PET

Topic: Looking Inside the Living Brain

ANS: c, Apply What You Know, 3 - Difficult, LO=2.9 - Describe how neuroimaging techniques can provide information about the brain's structure and function

APA=2.4

TB_02_130 Looking Inside the Living Brain_Understand_LO=2.9, APA 2.4

A brain-imaging method called _____ takes advantage of the magnetic properties of different atoms to take sharp, three-dimensional images of the brain.

a) electroencephalography (EEG)

b) magnetic resonance imaging (MRI)

Correct. MRI is a brain-imaging method using radio waves and magnetic fields of the body.

c) positron emission magnetography (PEM)

d) computed tomography (CT)

Incorrect. CT scans use X-rays.

Topic: Looking Inside the Living Brain

ANS: b, Understand the Concepts, 2 - Moderate, LO=2.9 - Describe how neuroimaging techniques can provide information about the brain's structure and function

APA=2.4

TB_02_131 Looking Inside the Living Brain_Remember_LO=2.9, APA 2.4

A brain-imaging method using radio pulses and magnetic fields of the body to produce detailed images of the brain is called _____.

a) electroencephalography (EEG)
b) magnetic resonance imaging (MRI)

Correct. MRI is a brain-imaging method using radio waves and magnetic fields of the body.

c) positron emission tomography (PET)
d) computed tomography (CT)

Incorrect. CT scans use X-rays.

Topic: Looking Inside the Living Brain
ANS: b, Remember the Facts, 2 - Moderate, LO=2.9 - Describe how neuroimaging techniques can provide information about the brain's structure and function
% correct 64 a= 19 b= 64 c= 7 d= 10 *r* = .20
% correct 81 a= 17 b= 81 c= 0 d= 2 *r* = .29
APA=2.4

TB_02_132 Looking Inside the Living Brain_Apply_LO=2.9, APA 2.4
Rashad is in the hospital and is about to undergo a brain-imaging process that involves placing him inside a magnetic field so that a computer can create three-dimensional images of his brain. What procedure is he about to undergo?

a) electroencephalography (EEG)
b) magnetic resonance imaging (MRI)

Correct. MRI is a brain-imaging method using radio waves and magnetic fields of the body.

c) computed tomography (CT)

Incorrect. CT scans use X-rays.

d) positron emission tomography (PET)

Topic: Looking Inside the Living Brain
ANS: b, Apply What You Know, 1 - Easy, LO=2.9 - Describe how neuroimaging techniques can provide information about the brain's structure and function
% correct 93 a= 4 b= 93 c= 0 d= 4 *r* = .29
APA=2.4

TB_02_133 Looking Inside the Living Brain_Apply_LO=2.9, APA 2.4
Small metal disks are pasted onto Miranda's scalp and they are connected by wire to a machine that translates the electrical energy from her brain into wavy lines on a moving piece of paper. From this description, it is evident that Miranda's brain is being studied through the use of _____.

a) a CT scan

Incorrect. CT scans take computer-controlled X-rays of the brain.

b) functional magnetic resonance imaging
c) a microelectrode
d) an electroencephalogram

Correct. Electroencephalograms record brain wave patterns.

Topic: Looking Inside the Living Brain
ANS: d, Apply What You Know, 1 - Easy, LO=2.9 - Describe how neuroimaging techniques can provide information about the brain's structure and function
% correct 81 a= 10 b= 5 c= 4 d= 81 *r* = .35
APA=2.4

TB_02_134 Looking Inside the Living Brain_Remember_LO=2.9, APA 2.4
Which of the following is a machine designed to record the brain wave patterns produced by electrical activity of the brain's cortex, just below the scalp?

a) deep lesioning
b) ESB

Incorrect. ESB is insertion of a thin insulated wire into the brain.

c) EEG

Correct. EEG records brain wave patterns.

d) CT scan

Topic: Looking Inside the Living Brain
ANS: c, Remember the Facts, 2 - Moderate, LO=2.9 - Describe how neuroimaging techniques can provide information about the brain's structure and function
APA=2.4

TB_02_135 Looking Inside the Living Brain_Remember_LO=2.9, APA 2.4
Which equipment is used to monitor brain waves?

a) CT scans

Incorrect. A CT scan is a brain-imaging method.

b) functional magnetic resonance imaging
c) microelectrode
d) electroencephalograph

Correct. Electroencephalographs monitor brain waves.

Topic: Looking Inside the Living Brain
ANS: d, Remember the Facts, 3 - Difficult, LO=2.9 - Describe how neuroimaging techniques can provide information about the brain's structure and function
% correct 31 a= 27 b= 19 c= 22 d= 31 *r* = .37
APA=2.4

TB_02_136 Looking Inside the Living Brain_Remember_LO=2.9, APA 2.4
Which of the following is a brain-imaging method in which radioactive glucose is injected into the subject and a computer compiles a color-coded image of the activity of the brain?

a) electroencephalography (EEG)
b) computed tomography (CT)
c) positron emission tomography (PET)

Correct. PET scan provides a color-coded image of the activity of the brain.

d) functional magnetic resonance imaging (fMRI)

Incorrect. FMRI does not involve radioactive sugar.

Topic: Looking Inside the Living Brain
ANS: c, Remember the Facts, 3 - Difficult, LO=2.9 - Describe how neuroimaging techniques can provide information about the brain's structure and function
% correct 48 a= 25 b= 12 c= 48 d= 13 *r* = .37
APA=2.4

TB_02_137 Looking Inside the Living Brain_Apply_LO=2.9, APA 2.4
Libby'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 radioactive glucose-like substance and then is told to lie down with her head in a scanner. The technique being used is _____.

a) positron emission tomography

Correct. PET involves injecting a radioactive glucose into the patient.

b) functional magnetic resonance imaging

Incorrect. FMRI does not involve injecting the patient with glucose.

c) microelectrode recording
d) an electroencephalogram

Topic: Looking Inside the Living Brain
ANS: a, Apply What You Know, 2 - Moderate, LO=2.9 - Describe how neuroimaging techniques can provide information about the brain's structure and function
APA=2.4

TB_02_138 Looking Inside the Living Brain_Apply_LO=2.9, APA 2.4
Marika needs to have a neuroimaging test that will track the activity of her brain, but wants to use a radioactive tracer that is more easily obtained than those used for PET. Which of the following offers the best alternative based on Marika's needs?

a) electroencephalography (EEG)
b) computed tomography (CT)
c) functional positron emission tomography (fPET)

Incorrect. There is no neuroimaging technique called fPET.

d) single photo emission computed tomography (SPECT)

Correct. SPECT offers this stated benefit over PET scans.

Topic: Looking Inside the Living Brain
ANS: d, Apply What You Know, 2 - Moderate, LO=2.9 - Describe how neuroimaging techniques can provide information about the brain's structure and function
APA=2.4

TB_02_139 Looking Inside the Living Brain_Understand_LO=2.9, APA 2.4
Which of the following is the primary benefit of SPECT over PET?

a) SPECT is a non-invasive neuroimaging technique, while PET is invasive.
b) SPECT offers the benefit of using radioactive tracers that are easier to obtain than PET.

Correct. SPECT allows the use of tracers that can be more easily obtained than those used in PET scans.

c) SPECT allows the monitoring of actual brain activity, while PET does not.
d) SPECT offers the monitoring of brain oxygen changes, while PET does not.

Incorrect. Both PET and SPECT can track changes in brain oxygenation levels.

Topic: Looking Inside the Living Brain
ANS: b, Understand the Concepts, 2 - Moderate, LO=2.9 - Describe how neuroimaging techniques can provide information about the brain's structure and function
APA=2.4

TB_02_140 Looking Inside the Living Brain_Apply_LO=2.9, APA 2.4
A researcher wants to obtain a "movie" of changes in the activity of the brain using images from different time periods. Which of these would be the best choice for this researcher?

a) electroencephalography (EEG)
b) computed tomography (CT)
c) positron emission tomography (PET)

Incorrect. PET provides a color-coded image of the activity of the brain, not moving images of the brain.

d) functional magnetic resonance imaging (fMRI)

Correct. fMRI takes MRI images and combines them into a moving image of the brain.

Topic: Looking Inside the Living Brain
ANS: d, Apply What You Know, 3 - Difficult, LO=2.9 - Describe how neuroimaging techniques can provide information about the brain's structure and function
% correct 40 a= 25 b= 18 c= 15 d= 40 *r* = .20
APA=2.4

From the Bottom Up: The Structures of the Brain

Learning Objective 2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each.

TB_02_141 From the Bottom Up: The Structures of the Brain_Remember_LO=2.10, APA 1.1
The brain is divided into several different structures on the bottom part of the brain referred to as the "hindbrain."

Which of the parts of the brain listed below is NOT located in the hindbrain?

a) medulla
b) pons
c) cerebellum

Incorrect. This part of the brain is in the hindbrain.

d) thalamus

Correct. This part of the brain is in the forebrain.

Topic: From the Bottom Up: The Structures of the Brain
ANS: d, Remember the Facts, 3 - Difficult, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
APA=1.1

TB_02_142 From the Bottom Up: The Structures of the Brain_Remember_LO=2.10, APA 1.1
The _____ is a structure in the brain stem responsible for life-sustaining functions, such as breathing and heart rate.

a) reticular activating system
b) pons

Incorrect. The pons plays a role in sleep, dreaming, left-right body coordination, and arousal.

c) medulla

Correct. The medulla is responsible for life-sustaining functions.

d) cerebellum

Topic: From the Bottom Up: The Structures of the Brain
ANS: c, Remember the Facts, 3 - Difficult, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
% correct 59 a= 3 b= 19 c= 59 d= 18 *r* = .27
% correct 60 a= 3 b= 14 c= 60 d= 22 *r* = .22
APA=1.1

TB_02_143 From the Bottom Up: The Structures of the Brain_Apply_LO=2.10, APA 1.1, 1.3
A car accident rendered Chris's nervous system unable to send messages for him to breathe, so he is on a respirator. Which brain structure was damaged in the accident?

a) pons

Incorrect. The pons plays a role in sleep, dreaming, left-right body coordination, and arousal.

b) medulla

Correct. The medulla is responsible for breathing.

c) cerebellum
d) reticular formation

Topic: From the Bottom Up: The Structures of the Brain
ANS: b, Apply What You Know, 3 - Difficult, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
% correct 48 a= 10 b= 48 c= 37 d= 5 *r* = .22
APA=1.1, 1.3

TB_02_144 From the Bottom Up: The Structures of the Brain_Remember_LO=2.10, APA 1.1
The point at which the nerves from the left side of the body cross over into the right side of the brain, and vice versa, is the _____.

a) reticular activating system
b) pons

Incorrect. The pons connects the top of the brain to the bottom.

c) medulla

Correct. This is the point where nerves cross over.

d) cerebellum

Topic: From the Bottom Up: The Structures of the Brain
ANS: c, Remember the Facts, 2 - Moderate, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
APA=1.1

TB_02_145 From the Bottom Up: The Structures of the Brain_Remember_LO=2.10, APA 1.1
The _____ is a structure in the brain stem that plays a role in sleep, dreaming, left-right body coordination, and arousal.

a) reticular activating system
b) pons

Correct. The pons plays a role in sleep, dreaming, left-right body coordination, and arousal.

c) medulla

Incorrect. The medulla is responsible for life-sustaining functions but does not play a role in sleep, dreaming, and arousal.

d) cerebellum

Topic: From the Bottom Up: The Structures of the Brain
ANS: b, Remember the Facts, 3 - Difficult, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
APA=1.1

TB_02_146 From the Bottom Up: The Structures of the Brain_Apply_LO=2.10, APA 1.1, 1.3
A college student is having difficulty staying awake during the day and sleeping through the night. Her difficulties are MOST likely due to problems in the _____.

a) hippocampus

Incorrect. The hippocampus is responsible for the formation of long-term memory and does not play a role in keeping people awake and alert.

b) pons

Correct. The pons plays a role in sleep, dreaming, and arousal.

c) medulla
d) cerebellum

Topic: From the Bottom Up: The Structures of the Brain
ANS: b, Apply What You Know, 3 - Difficult, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
% correct 44 a= 15 b= 44 c= 25 d= 16 *r* = .22
% correct 41 a= 31 b= 41 c= 12 d= 16 *r* = .47
APA=1.1, 1.3

TB_02_147 From the Bottom Up: The Structures of the Brain_Apply_LO=2.10, APA 1.1, 1.3
Since Jessica suffered a head injury in a car accident 3 months ago, she has not experienced dreams as she had in the past. She used to dream vivid, active dreams. Which part of her brain was most likely affected during the car accident, which is related to her problem dreaming?

a) pons

Correct. The pons has been shown to influence sleep and dreaming as well as arousal.

b) cerebellum
c) cerebral cortex
d) pituitary gland

Incorrect. The correct answer is the pons.
Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Apply What You Know, 3 - Difficult, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
% correct 46 a= 46 b= 22 c= 32 d= 1 *r* = .40
APA=1.1, 1.3

TB_02_148 From the Bottom Up: The Structures of the Brain_Remember_LO=2.10, APA 1.1
Which of the following is responsible for the ability to selectively attend to certain kinds of information in one's surroundings and become alert to changes?

a) reticular formation

Correct. The reticular formation plays a role in selective attention.

b) pons

Incorrect. The pons plays a role in sleep, dreaming, and arousal but not in selective attention.

c) medulla
d) cerebellum

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Remember the Facts, 2 - Moderate, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
APA=1.1

TB_02_149 From the Bottom Up: The Structures of the Brain_Remember_LO=2.10, APA 1.1
What is the main function of the reticular formation?

a) to control thinking
b) to regulate emotions
c) to control levels of alertness and arousal

Correct. The reticular formation controls levels of alertness and arousal.

d) to coordinate involuntary rapid fine-motor movements.

Incorrect. This is the role of the cerebellum.
Topic: From the Bottom Up: The Structures of the Brain
ANS: c, Remember the Facts, 3 - Difficult, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
% correct 37 a= 3 b= 30 c= 37 d= 30 *r* = .20
APA=1.1

TB_02_150 From the Bottom Up: The Structures of the Brain_Apply_LO=2.10, APA 1.1, 1.3
Katie has grown up sleeping with a fan running in her room since she was an infant. This provides white noise to drown out the television programs being watched by other family members who were still awake. In an effort to save electricity, her mother has started coming into her room and turning her fan off after she thinks Katie is asleep. However, each time Katie wakes up and asks for the fan to be turned back on. Katie is selectively attending to certain kinds of information in her surroundings, which has been linked to the _____ part of the brain.

a) reticular formation

Correct. Research has shown that the RF in the brain would be sensitive to this difference in the environment.

b) pons
c) cerebellum
d) medulla

Incorrect. The correct answer is the reticular formation.
Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Apply What You Know, 2 - Moderate, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
APA=1.1, 1.3

TB_02_151 From the Bottom Up: The Structures of the Brain_Apply_LO=2.10, APA 1.1, 1.3
Alice is typing her term paper in the computer lab. Although a class is going on just a few feet away, she does not seem to notice. Which part of the brain allows Alice to focus on her typing and ignore the distractions that surround her?

a) reticular formation

Correct. The reticular formation is responsible for selective attention.

b) pons

Incorrect. The pons plays a role in sleep, dreaming, and arousal but not in selective attention.

c) medulla

d) cerebellum

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Apply What You Know, 2 - Moderate, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
APA=1.1, 1.3

TB_02_152 From the Bottom Up: The Structures of the Brain_Remember_LO=2.10, APA 1.1
The cerebellum _____.

a) controls blood pressure

b) is involved in emotional behavior

c) coordinates involuntary, rapid, fine-motor movement

Correct. The cerebellum does coordinate involuntary rapid fine-motor movement.

d) relays messages from the sensory receptors

Incorrect. The cerebellum coordinates involuntary rapid fine-motor movement.

Topic: From the Bottom Up: The Structures of the Brain
ANS: c, Remember the Facts, 2 - Moderate, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
% correct 65 a= 4 b= 14 c= 65 d= 17 *r* = .25
APA=1.1

TB_02_153 From the Bottom Up: The Structures of the Brain_Remember_LO=2.10, APA 1.1
Which of the following coordinates involuntary, rapid, fine-motor movement?

a) medulla

b) pons

c) reticular formation

Incorrect. The reticular formation is not involved in movement.

d) cerebellum

Correct. The cerebellum coordinates involuntary rapid fine-motor movement.

Topic: From the Bottom Up: The Structures of the Brain
ANS: d, Remember the Facts, 1 - Easy, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
APA=1.1

TB_02_154 From the Bottom Up: The Structures of the Brain_Apply_LO=2.10, APA 1.1
Damage to the cerebellum is likely to disrupt which of the following?

a) playing basketball

Correct. The cerebellum coordinates movements that have to happen in rapid succession.

b) sleeping

Incorrect. The pons plays a role in sleep and dreaming, not in movement.

c) homeostasis

d) thinking

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Apply What You Know, 3 - Difficult, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
APA=1.1

TB_02_155 From the Bottom Up: The Structures of the Brain_Apply_LO=2.10, APA 1.1, 1.3
Tracey has been unable to participate in her gymnastics class and has become very uncoordinated since she was involved in an accident where she suffered a head injury. As a result of the accident, she was likely to have suffered damage to her _____.

a) cerebellum

Correct. This part of the brain controls coordination and balance.

b) medulla
c) cerebral cortex
d) hypothalamus

Incorrect. This is not the correct part of the brain that controls these functions.

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Apply What You Know, 2 - Moderate, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
APA=1.1, 1.3

TB_02_156 From the Bottom Up: The Structures of the Brain_Apply_LO=2.10, APA 1.1
If your _____ was damaged, you might walk oddly and have trouble standing normally.

a) pons
b) medulla

Incorrect. The medulla is responsible for life-sustaining functions like respiration and circulation.

c) cerebellum

Correct. The cerebellum is responsible for balance and fine motor coordination.

d) amygdala

Topic: From the Bottom Up: The Structures of the Brain
ANS: c, Apply What You Know, 2 - Moderate, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
APA=1.1

TB_02_157 From the Bottom Up: The Structures of the Brain_Apply_LO=2.10, APA 1.1, 1.3
Jennifer has been diagnosed with spinocerebellar degeneration. The first stage of the disease involves tremors and unsteady gate. In the later stages, she will be unable to stand, walk, and will be uncoordinated in her movements. This disease affects the part of the brain called the _____.

a) hippocampus
b) amygdala
c) cerebellum

Correct. This is the part of the brain that is affected by this disease.

d) cerebral cortex

Incorrect. This is not the part of the brain that is affected.

Topic: From the Bottom Up: The Structures of the Brain
ANS: c, Apply What You Know, 2 - Moderate, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
APA=1.1, 1.3

Learning Objective 2.11 - Identify the structures of the brain that control emotion, learning, memory, and motivation.

TB_02_158 From the Bottom Up: The Structures of the Brain_Remember_LO=2.11, APA 1.1
Which of the following is a group of several brain structures located in the inner margin of the upper brain and is involved in learning, emotion, and motivation?

a) limbic system

Correct. This structure is involved in learning, memory, emotion, and motivation.

b) cerebellum
c) cerebral cortex
d) cerebrum

Incorrect. The cerebrum consists of the cerebral hemispheres and connecting structures.

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Remember the Facts, 3 - Difficult, LO=2.11 - Identify the structures of the brain that control emotion, learning, memory, and motivation
APA=1.1

TB_02_159 From the Bottom Up: The Structures of the Brain_Remember_LO=2.11, APA 1.1
What part of the brain acts as a relay station for incoming sensory information?

a) hypothalamus

Incorrect. The hypothalamus regulates sleep, hunger, thirst, and sex.

b) thalamus

Correct. The thalamus acts as a relay station.

c) cerebellum

d) pituitary gland

Topic: From the Bottom Up: The Structures of the Brain
ANS: b, Remember the Facts, 3 - Difficult, LO=2.11 - Identify the structures of the brain that control emotion, learning, memory, and motivation
% correct 48 a= 19 b= 48 c= 25 d= 8 *r* = .53
% correct 48 a= 22 b= 48 c= 22 d= 8 *r* = .48
APA=1.1

TB_02_160 From the Bottom Up: The Structures of the Brain_Remember_LO=2.11, APA 1.1
Signals from the neurons of which sense are not sent to the cortex by the thalamus?

a) hearing

b) smell

Correct. Signals from the neurons of the sense of smell go directly into special parts of the brain called olfactory bulbs, which are the structures responsible for smell.

c) taste

Incorrect. Signals from the neurons involved in taste are sent to the cortex by the thalamus.

d) vision

Topic: From the Bottom Up: The Structures of the Brain
ANS: b, Remember the Facts, 2 - Moderate, LO=2.11 - Identify the structures of the brain that control emotion, learning, memory, and motivation
APA=1.1

TB_02_161 From the Bottom Up: The Structures of the Brain_Understand_LO=2.11, APA 1.1
The thalamus is somewhat similar to a(n) _____.

a) triage nurse

Correct. As your authors note, the thalamus is often compared with a triage nurse because it routes sensory information to different parts of the cerebral cortex.

b) fast food menu

Incorrect. There is really nothing about this answer that could be considered correct.

c) stop sign

d) bus stop

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Understand the Concepts, 2 - Moderate, LO=2.11 - Identify the structures of the brain that control emotion, learning, memory, and motivation
APA=1.1

TB_02_162 From the Bottom Up: The Structures of the Brain_Apply_LO=2.11, APA 1.1, 1.3
Jerry loves the smell of the grass after it rains. This is a result of his _____, which has/have received signals from neurons in his sinus cavity.

a) thalamus

b) olfactory bulbs

Correct. This is the part of the brain that is related to the sense of smell.

c) opticfactory bulbs

d) hippocampus

Incorrect. The correct answer is the olfactory bulbs.

Topic: From the Bottom Up: The Structures of the Brain

ANS: b, Apply What You Know, 2 - Moderate, LO=2.11 - Identify the structures of the brain that control emotion, learning, memory, and motivation

% correct 75 a= 14 b= 75 c= 0 d= 12 *r* = .43

APA=1.1, 1.3

TB_02_163 From the Bottom Up: The Structures of the Brain_Remember_LO=2.11, APA 1.1

Which part of the brain is very small but extremely powerful and controls the pituitary gland?

a) hippocampus

b) thalamus

Incorrect. The thalamus acts as a relay station for incoming sensory information.

c) hypothalamus

Correct. The hypothalamus is very small but extremely powerful and controls the pituitary gland.

d) amygdala

Topic: From the Bottom Up: The Structures of the Brain

ANS: c, Remember the Facts, 2 - Moderate, LO=2.11 - Identify the structures of the brain that control emotion, learning, memory, and motivation

APA=1.1

TB_02_164 From the Bottom Up: The Structures of the Brain_Remember_LO=2.11, APA 1.1

Eating, drinking, sexual behavior, sleeping, and temperature control are most strongly influenced by the _____.

a) hippocampus

b) thalamus

Incorrect. The thalamus acts as a relay station for incoming sensory information and is not involved in eating, drinking, sexual behavior, sleeping, and temperature control.

c) hypothalamus

Correct. The hypothalamus regulates sleep, hunger, thirst, and sex.

d) amygdala

Topic: From the Bottom Up: The Structures of the Brain

ANS: c, Remember the Facts, 3 - Difficult, LO=2.11 - Identify the structures of the brain that control emotion, learning, memory, and motivation

% correct 50 a= 12 b= 24 c= 50 d= 14 *r* = .21

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

APA=1.1

TB_02_165 From the Bottom Up: The Structures of the Brain_Understand_LO=2.11, APA 1.1

Which of the following is a likely effect of damage to the hypothalamus?

a) reduced use of left arm

b) deregulation of hormones

Correct. The hypothalamus regulates the pituitary gland and, therefore, damage can result in the deregulation of hormones.

c) development of aphasia

Incorrect. Damage to Broca's and Wernicke's area plays a role in the development of aphasia.

d) reduced ability to reason

Topic: From the Bottom Up: The Structures of the Brain

ANS: b, Understand the Concepts, 2 - Moderate, LO=2.11 - Identify the structures of the brain that control emotion, learning, memory, and motivation

APA=1.1

TB_02_166 From the Bottom Up: The Structures of the Brain_Remember_LO=2.11, APA 1.1

The _____ is the part of the brain responsible for the formation of long-term memories.

a) hippocampus

Correct. The hippocampus is responsible for the formation of long-term memories.

b) hypothalamus

Incorrect. The hypothalamus regulates sleep, hunger, thirst, and sex, and is not involved in memory.

c) fornix

d) amygdala

Topic: From the Bottom Up: The Structures of the Brain

ANS: a, Remember the Facts, 2 - Moderate, LO=2.11 - Identify the structures of the brain that control emotion, learning, memory, and motivation

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

APA=1.1

TB_02_167 From the Bottom Up: The Structures of the Brain_Apply_LO=2.11, APA 1.1

If you have a problem remembering things that happened a year ago, doctors might check for damage to the area of the brain called the _____.

a) hippocampus

Correct. The hippocampus is responsible for the formation of long-term memories.

b) hypothalamus

Incorrect. The hypothalamus regulates sleep, hunger, thirst, and sex, but not memory.

c) fornix

d) amygdala

Topic: From the Bottom Up: The Structures of the Brain

ANS: a, Apply What You Know, 2 - Moderate, LO=2.11 - Identify the structures of the brain that control emotion, learning, memory, and motivation

APA=1.1

TB_02_168 From the Bottom Up: The Structures of the Brain_Remember_LO=2.11, APA 1.1

People suffering from Alzheimer's disease have much lower levels of acetylcholine in the _____.

a) hippocampus

Correct. Acetylcholine is involved in the memory function of the hippocampus.

b) hypothalamus

Incorrect. The hypothalamus regulates sleep, hunger, thirst, and sex, but not memory.

c) fornix

d) amygdala

Topic: From the Bottom Up: The Structures of the Brain

ANS: a, Remember the Facts, 3 - Difficult, LO=2.11 - Identify the structures of the brain that control emotion, learning, memory, and motivation

APA=1.1

TB_02_169 From the Bottom Up: The Structures of the Brain_Remember_LO=2.11, APA 1.1

Which of the following brain structures is located near the hippocampus and is responsible for fear responses and memory of fear?

a) hippocampus

b) hypothalamus

Incorrect. The hypothalamus regulates sleep, hunger, thirst, and sex, not fear responses.

c) fornix

d) amygdala

Correct. The amygdala is responsible for fear responses and memory of fear.

Topic: From the Bottom Up: The Structures of the Brain

ANS: d, Remember the Facts, 3 - Difficult, LO=2.11 - Identify the structures of the brain that control emotion, learning, memory, and motivation

% correct 37 a= 3 b= 51 c= 8 d= 37 *r* = .29

APA=1.1

TB_02_170 From the Bottom Up: The Structures of the Brain_Remember_LO=2.11, APA 1.1

Rats that have a damaged _____ will show no fear when placed next to a cat.

a) hippocampus

b) hypothalamus

Incorrect. The hypothalamus regulates sleep, hunger, thirst, and sex, not fear responses.

c) fornix

d) amygdala

Correct. The amygdala is responsible for fear responses and memory of fear.

Topic: From the Bottom Up: The Structures of the Brain

ANS: d, Remember the Facts, 3 - Difficult, LO=2.11 - Identify the structures of the brain that control emotion, learning, memory, and motivation

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

APA=1.1

TB_02_171 From the Bottom Up: The Structures of the Brain_Apply_LO=2.11, APA 1.1, 1.3

Stan has been extremely afraid of cats since he was scratched as a 5-year-old. Whenever he sees a cat, he remembers the time he was scratched across his face, and he starts to feel afraid. If a cat comes towards him, he often runs away immediately, as he is afraid of being scratched again. Stan's behaviors and recollection of this trauma is a result of the _____ in the limbic system.

a) hippocampus

b) thalamus

c) amygdala

Correct. This is the part of the brain that controls many fear responses and memories.

d) medulla

Incorrect. The correct answer is the amygdala.

Topic: From the Bottom Up: The Structures of the Brain

ANS: c, Apply What You Know, 3 - Difficult, LO=2.11 - Identify the structures of the brain that control emotion, learning, memory, and motivation

APA=1.1, 1.3

TB_02_172 From the Bottom Up: The Structures of the Brain_Apply_LO=2.11, APA 1.1, 1.3

As Joe walks to his car late at night, he hears footsteps behind him. Feeling afraid, Joe grips his keys and quickens his pace. It is likely that Joe's _____ has been activated.

a) hypothalamus

Incorrect. The hypothalamus would be responsible for activating the fight-or-flight system, but only after the amygdala interpreted a fearful or threatening response.

b) hippocampus

c) amygdala

Correct. The amygdala processes the emotions of anger and fear.

d) cerebellum

Topic: From the Bottom Up: The Structures of the Brain

ANS: c, Apply What You Know, 2 - Moderate, LO=2.11 - Identify the structures of the brain that control emotion, learning, memory, and motivation

APA=1.1, 1.3

Learning Objective 2.12 - Identify the parts of the cortex that control the different senses and the movement of the body.

TB_02_173 From the Bottom Up: The Structures of the Brain_Remember_LO=2.12, APA 1.1

The outermost part of the brain, which is made up of tightly packed neurons and is only a tenth of an inch thick, is called the _____.

a) amygdala

b) medulla

c) cerebellum

Incorrect. The cerebellum is not the outermost part of the brain.

d) cortex

Correct. The outermost part of the brain is called the cortex.

Topic: From the Bottom Up: The Structures of the Brain
ANS: d, Remember the Facts, 1 - Easy, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
APA=1.1

TB_02_174 From the Bottom Up: The Structures of the Brain_Remember_LO=2.12, APA 1.1

The brain is divided into two sections referred to as _____.

a) cerebral hemispheres

Correct. The two sections of the cortex are called cerebral hemispheres.

b) cerebellums

Incorrect. The cerebellum is not a section of the cortex.

c) corpus callosums

d) neurotransmitters

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Remember the Facts, 1 - Easy, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
% correct 91 a= 91 b= 3 c= 5 d= 0 *r* = .29
APA=1.1

TB_02_175 From the Bottom Up: The Structures of the Brain_Remember_LO=2.12, APA 1.1

The thick band of axons that connects the right and left cerebral hemispheres is called the _____.

a) cortex

Incorrect. The cortex is the outermost part of the brain.

b) cerebrum

c) corpus callosum

Correct. The corpus callosum connects the right and left cerebral hemispheres.

d) cerebellum

Topic: From the Bottom Up: The Structures of the Brain
ANS: c, Remember the Facts, 1 - Easy, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
% correct 90 a= 3 b= 1 c= 90 d= 5 *r* = .51
% correct 81 a=0 b= 4 c= 81 d= 15 *r* = .54
APA=1.1

TB_02_176 From the Bottom Up: The Structures of the Brain_Remember_LO=2.12, APA 1.1

Which of the following is the section of the brain located at the rear and bottom of each cerebral hemisphere and contains the visual centers of the brain?

a) occipital lobe

Correct. The occipital lobes contain the visual centers of the brain.

b) parietal lobe

Incorrect. The parietal lobe contains the somatosensory cortex, not the visual centers.

c) temporal lobe

d) frontal lobe

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Remember the Facts, 1 - Easy, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
APA=1.1

TB_02_177 From the Bottom Up: The Structures of the Brain_Apply_LO=2.12, APA 1.1, 1.3
After a head injury, a person reports that she is unable to see, although her eyes are uninjured. A doctor would suspect an injury in the _____ lobe.

a) occipital

Correct. The occipital lobes contain the visual centers of the brain.

b) parietal

Incorrect. The parietal lobes contain the somatosensory cortex, not the visual centers.

c) temporal

d) frontal

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Apply What You Know, 2 - Moderate, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
APA=1.1, 1.3

TB_02_178 From the Bottom Up: The Structures of the Brain_Remember_LO=2.12, APA 1.1
Which of the following regions contains the primary visual cortex?

a) occipital lobe

Correct. The occipital lobes contain the primary visual cortex.

b) parietal lobe

Incorrect. The parietal lobes contain the somatosensory cortex, not the primary visual cortex.

c) temporal lobe

d) frontal lobe

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Remember the Facts, 1 - Easy, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
% correct 82 a= 82 b= 4 c= 14 d= 0 *r* = .47
APA=1.1

TB_02_179 From the Bottom Up: The Structures of the Brain_Remember_LO=2.12, APA 1.1
The part of the occipital lobe that is responsible for receiving visual information from the eyes is called the _____.

a) primary visual cortex

Correct. The occipital lobes contain the primary visual cortex.

b) somatosensory cortex

Incorrect. The parietal lobes contain the somatosensory cortex.

c) temporal lobe

d) frontal lobe

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Remember the Facts, 2 - Moderate, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
% correct 74 a= 74 b= 18 c= 8 d= 3 *r* = .30
% correct 79 a= 79 b= 14 c= 5 d= 2 *r* = .36
APA=1.1

TB_02_180 From the Bottom Up: The Structures of the Brain_Remember_LO=2.12, APA 1.1
The section of the brain responsible for identifying the visual information in the primary visual cortex is called the _____.

a) visual association cortex

Correct. This part of the brain is responsible for interpreting visual information.

b) somatosensory cortex

Incorrect. The somatosensory cortex processes information from the skin and internal body receptors for touch, temperature, and body position, not visual information.

c) temporal lobe

d) frontal lobe

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Remember the Facts, 1 - Easy, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
APA=1.1

TB_02_181 From the Bottom Up: The Structures of the Brain_Understand_LO=2.12, APA 1.1
Damage to the _____ would result in an inability to identify and comprehend what is seen through the eyes.

a) visual association cortex

Correct. This part of the brain is responsible for interpreting visual information.

b) primary visual cortex

Incorrect. The primary visual cortex receives visual information from the eyes but does not interpret it.

c) temporal lobe
d) frontal lobe

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Understand the Concepts, 3 - Difficult, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
% correct 20 a= 20 b= 26 c= 36 d= 19 *r* = .30
APA=1.1

TB_02_182 From the Bottom Up: The Structures of the Brain_Apply_LO=2.12, APA 1.1, 1.3
John has decided to start to learn how to wrestle. On his first day at practice, a seasoned wrestler slams the back of his head to the mat. John was shaken and reported to the trainer that he "saw stars" after he hit his head. As a result of "seeing stars," John's _____ were temporarily affected as a result of the slam.

a) corpus callosum
b) occipital lobes

Correct. This part of the brain is in the back of the head and controls vision.

c) parietal lobes

Incorrect. This is not correct, as the occipital lobe controls vision.

d) somatosensory cortex

Topic: From the Bottom Up: The Structures of the Brain
ANS: b, Apply What You Know, 3 - Difficult, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
% correct 92 a= 2 b= 92 c= 3 d= 3 *r* = .34
APA=1.1, 1.3

TB_02_183 From the Bottom Up: The Structures of the Brain_Remember_LO=2.12, APA 1.1
Which of the following regions contains the somatosensory cortex?

a) occipital lobe

Incorrect. This region contains the primary visual cortex.

b) parietal lobe

Correct. The parietal lobes contain the somatosensory cortex.

c) temporal lobe
d) frontal lobe

Topic: From the Bottom Up: The Structures of the Brain
ANS: b, Remember the Facts, 2 - Moderate, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
APA=1.1

TB_02_184 From the Bottom Up: The Structures of the Brain_Remember_LO=2.12, APA 1.1
The _____ lobes are located at the top and back of each cerebral hemisphere, containing the centers for touch, body position, and temperature.

a) frontal
b) temporal

Incorrect. The temporal lobes are responsible for the sense of hearing and meaningful speech, not for touch, body

position, or temperature.

c) occipital

d) parietal

Correct. The parietal lobes contain the centers for touch, body position, and temperature.

Topic: From the Bottom Up: The Structures of the Brain

ANS: d, Remember the Facts, 3 - Difficult, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body

APA=1.1

TB_02_185 From the Bottom Up: The Structures of the Brain_Apply_LO=2.12, APA 1.1, 1.3

Al is trying to decide whether the shower is hot enough to step in. Hal is listening to his MP3 player. Sal is looking at a beautiful painting in an art museum. Which individual is using his parietal lobe?

a) Al

Correct. The processing of "touch" information like this is handled by the parietal lobe.

b) Hal

Incorrect. Auditory processing is handled by the temporal lobe, not the parietal lobe.

c) Sal

d) Hal and Sal are, but Al is not.

Topic: From the Bottom Up: The Structures of the Brain

ANS: a, Apply What You Know, 3 - Difficult, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body

APA=1.1, 1.3

TB_02_186 From the Bottom Up: The Structures of the Brain_Apply_LO=2.12, APA 1.1, 1.3

Darla was in an automobile accident that resulted in an injury to her brain. Her sense of touch has been affected. Which part of the brain is the most likely site of the damage?

a) frontal lobe

b) temporal lobe

Incorrect. The temporal lobes are responsible for the sense of hearing and meaningful speech, not touch.

c) occipital lobe

d) parietal lobes

Correct. The parietal lobes contain the centers for touch, taste, and temperature.

Topic: From the Bottom Up: The Structures of the Brain

ANS: d, Apply What You Know, 2 - Moderate, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body

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

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

APA=1.1, 1.3

TB_02_187 From the Bottom Up: The Structures of the Brain_Remember_LO=2.12, APA 1.1

Which of the following regions contains the auditory cortex?

a) temporal lobes

Correct. The temporal lobes contain the auditory cortex.

b) parietal lobes

Incorrect. The parietal lobes contain the somatosensory cortex but not the auditory cortex.

c) frontal lobes

d) occipital lobes

Topic: From the Bottom Up: The Structures of the Brain

ANS: a, Remember the Facts, 2 - Moderate, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body

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

APA=1.1

TB_02_188 From the Bottom Up: The Structures of the Brain_Remember_LO=2.12, APA 1.1

The part of the brain located just behind the temples, containing neurons responsible for the sense of hearing and

meaningful speech, is called the _____.

a) temporal lobes

Correct. The temporal lobes are responsible for the sense of hearing and meaningful speech.

b) parietal lobes

Incorrect. The parietal lobes are not involved with hearing or speech.

c) frontal lobes

d) occipital lobes

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Remember the Facts, 2 - Moderate, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
% correct 72 a= 72 b= 15 c= 8 d= 5 *r* = .51
% correct 79 a= 79 b= 12 c= 4 d= 5 *r* = .40
APA=1.1

TB_02_189 From the Bottom Up: The Structures of the Brain_Apply_LO=2.12, APA 1.1, 1.3
Bobby B. was rollerblading when a cat jumped right in front of him, causing him to fall. When he fell, he landed on the side of his head. Shortly afterwards, Bobby complained that he could not understand what people were saying to him. Which lobe would have been most affected by this fall given what he experienced?

a) frontal

b) temporal

Correct. The comprehension of language is one of the many tasks handled by the temporal lobe.

c) parietal

d) occipital

Incorrect. The occipital lobe is really responsible for visual processing, and does not play any role in the comprehension of language.

Topic: From the Bottom Up: The Structures of the Brain
ANS: b, Apply What You Know, 3 - Difficult, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
APA=1.1, 1.3

TB_02_190 From the Bottom Up: The Structures of the Brain_Apply_LO=2.12, APA 1.1, 1.3
Warren is having trouble deciding what he wants to eat for breakfast. Which lobe of his brain is especially active as he makes his selection?

a) temporal

Incorrect. This part of the brain is responsible for the sense of hearing and meaningful speech.

b) parietal

c) frontal

Correct. The frontal lobes are responsible for decision-making skills.

d) occipital

Topic: From the Bottom Up: The Structures of the Brain
ANS: c, Apply What You Know, 3 - Difficult, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
% correct 64 a= 10 b= 21 c= 64 d= 5 *r* = .42
% correct 66 a= 8 b= 26 c= 66 d= 1 *r* = .38
APA=1.1, 1.3

TB_02_191 From the Bottom Up: The Structures of the Brain_Remember_LO=2.12, APA 1.1
Which of the following lobes are involved in planning, memory, and personality?

a) temporal lobes

Incorrect. This part of the brain is responsible for the sense of hearing and meaningful speech, not planning, memory, or personality.

b) parietal lobes

c) frontal lobes

Correct. The frontal lobes are involved in planning, memory, and personality.

d) occipital lobes

Topic: From the Bottom Up: The Structures of the Brain
ANS: c, Remember the Facts, 2 - Moderate, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
% correct 70 a= 11 b= 0 c= 70 d= 18 *r* = .30
% correct 70 a= 10 b= 2 c= 70 d= 18 *r* = .34
APA=1.1

TB_02_192 From the Bottom Up: The Structures of the Brain_Apply_LO=2.12, APA 1.1, 1.2, 1.3
Joella was rollerblading when a cat jumped right in front of her, causing her to trip and fall. When she fell, she partially landed on the front side of her head near her forehead. Shortly afterward, Joella exhibited symptoms similar to that of Phineas Gage. Which lobe would have been most affected by this fall?

a) frontal

Correct. Phineas Gage suffered extreme trauma to the frontal lobe of his brain, impacting all sorts of functions, including his personality.

b) temporal

Incorrect. The famous story of Phineas Gage gave us insight into the functioning of the frontal lobe of the brain.

c) parietal
d) occipital

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Apply What You Know, 2 - Moderate, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
APA=1.1, 1.2, 1.3

TB_02_193 From the Bottom Up: The Structures of the Brain_Apply_LO=2.12, APA 1.2
Phineas Gage tragically had a tamping iron propelled through his head. Both left and right sides of the prefrontal cortex were severely damaged. As a result of the accident, Phineas Gage:

a) died from his injuries.
b) suffered loss of his arms and legs.
c) lost his sense of hearing.

Incorrect. Hearing is handled by the temporal lobe, not the frontal lobe of the brain.

d) suffered a change in personality.

Correct. After Phineas Gage's accident, his personality changed dramatically.

Topic: From the Bottom Up: The Structures of the Brain
ANS: d, Apply What You Know, 1 - Easy, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
APA=1.2

TB_02_194 From the Bottom Up: The Structures of the Brain_Apply_LO=2.12, APA 1.1, 1.3
Ito was driving through a rough part of town late at night when a stray bullet hit the front side of his head. Both the left and right sides of his prefrontal cortex were severely damaged. As a result of the accident, Ito most likely:

a) died from his injuries.

Incorrect. Gage did not die as a result of the accident.

b) suffered loss of his arms and legs.
c) lost his sense of hearing.
d) suffered a change in personality.

Correct. Personality changes could be a result of damage to the frontal lobes of the brain, as in the famous case of Phineas Gage.

Topic: From the Bottom Up: The Structures of the Brain
ANS: d, Apply What You Know, 2 - Moderate, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
APA=1.1, 1.3

TB_02_195 From the Bottom Up: The Structures of the Brain_Apply_LO=2.12, APA 1.1, 1.3
Ever since he suffered a brain injury by falling from a ladder, Zack's wife has continued to tell the doctor that his personality has changed. He used to be fun loving and carefree, but he is now more critical and yells at his children

for seemingly little reason. Zack is likely to have suffered damage to the _____ of his cortex.

a) occipital lobe

Incorrect. If his vision were affected, this would be accurate.

b) parietal lobe
c) temporal lobe
d) frontal lobe

Correct. The frontal lobes are connected to personality and decision-making processes.

Topic: From the Bottom Up: The Structures of the Brain
ANS: d, Apply What You Know, 3 - Difficult, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
APA=1.1, 1.3

TB_02_196 From the Bottom Up: The Structures of the Brain_Apply_LO=2.12, APA 1.1, 1.3
Marta was in an automobile accident and suffered an injury to her brain, resulting in paralysis of her left arm. What part of Marta's brain was injured?

a) auditory association area
b) motor cortex

Correct. The motor cortex is responsible for sending motor commands to the muscles of the somatic nervous system.

c) association areas
d) somatosensory cortex

Incorrect. This area processes information from the skin and internal body receptors for touch, temperature, and body position, but is not involved with arm muscles.

Topic: From the Bottom Up: The Structures of the Brain
ANS: b, Apply What You Know, 1 - Easy, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
% correct 82 a= 0 b= 82 c= 5 d= 11 *r* = .36
APA=1.1, 1.3

TB_02_197 From the Bottom Up: The Structures of the Brain_Remember_LO=2.12, APA 1.1
Messages from the brain to the muscles and glands in the body begin their journey in the _____.

a) auditory association area
b) motor cortex

Correct. Messages from the brain to the muscles and glands begin their journey in the motor cortex.

c) association areas
d) somatosensory cortex

Incorrect. This area is not involved with muscles and glands.

Topic: From the Bottom Up: The Structures of the Brain
ANS: b, Remember the Facts, 2 - Moderate, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
APA=1.1

TB_02_198 From the Bottom Up: The Structures of the Brain_Understand_LO=2.12, APA 1.1
_____ are fired when an animal performs an action or when the animal observes that same action being performed. For example, an infant will mimic the facial expressions of adults.

a) Mirror neurons

Correct. Mirror neurons are fired.

b) Statue neurons
c) Facial neurons
d) Observation neurons

Incorrect. This is a fictitious name for a neuron.

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Understand the Concepts, 3 - Difficult, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
APA=1.1

Learning Objective 2.13 - Identify the parts of the cortex are responsible for higher forms of thought, such as language.

TB_02_199 From the Bottom Up: The Structures of the Brain_Remember_LO=2.13, APA 1.1
Incoming sensory messages are made sense of in _____.

a) Broca's area

Incorrect. Broca's area is devoted to the production of speech rather than helping people make sense of incoming sensory input.

b) the motor projection areas

c) the association areas

Correct. The association areas help people make sense of incoming sensory input.

d) Wernicke's area

Topic: From the Bottom Up: The Structures of the Brain
ANS: c, Remember the Facts, 3 - Difficult, LO=2.13 - Identify the parts of the cortex are responsible for higher forms of thought, such as language
% correct 41 a= 20 b= 14 c= 41 d= 25 *r* = .49
APA=1.1

TB_02_200 From the Bottom Up: The Structures of the Brain_Remember_LO=2.13, APA 1.1
The area of the frontal lobe that is devoted to the production of fluent speech is _____ area.

a) Broca's

Correct. Broca's area is devoted to the production of fluent speech.

b) Gall's

c) Wernicke's

Incorrect. Wernicke's area is devoted to the production of meaningful language.

d) Korsakoff's

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Remember the Facts, 2 - Moderate, LO=2.13 - Identify the parts of the cortex are responsible for higher forms of thought, such as language
% correct 74 a= 74 b= 3 c= 19 d= 4 *r* = .31
% correct 73 a= 73 b= 3 c= 21 d= 4 *r* = .27
APA=1.1

TB_02_201 From the Bottom Up: The Structures of the Brain_Apply_LO=2.13, APA 1.1, 1.3
Bill was admitted to the hospital last week after he fell. When Bill's son visited, he found that his father was unable to get words out in a smooth, connected fashion. If Bill's difficulty speaking is due to brain damage, what is the likely location of the damage?

a) Broca's

Correct. Broca's area is devoted to the production of fluent speech.

b) Gall's

c) Wernicke's

Incorrect. Wernicke's area is devoted to the production of meaningful language.

d) Korsakoff's

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Apply What You Know, 2 - Moderate, LO=2.13 - Identify the parts of the cortex are responsible for higher forms of thought, such as language
% correct 75 a= 75 b= 2 c= 22 d= 2 *r* = .35
APA=1.1, 1.3

TB_02_202 From the Bottom Up: The Structures of the Brain_Remember_LO=2.13, APA 1.1
The area at the back of the left temporal lobe that is crucial in the ability to listen, process, and understand what others are saying is _____ area.

a) Broca's

Incorrect. Broca's area is devoted to the production of fluent speech.

b) Gall's

c) Wernicke's

Correct. Wernicke's area is devoted to the production of meaningful language.

d) Korsakoff's

Topic: From the Bottom Up: The Structures of the Brain

ANS: c, Remember the Facts, 3 - Difficult, LO=2.13 - Identify the parts of the cortex are responsible for higher forms of thought, such as language

% correct 49 a= 37 b= 8 c= 49 d= 6 *r* = .35

APA=1.1

TB_02_203 From the Bottom Up: The Structures of the Brain_Apply_LO=2.13, APA 1.1, 1.3

Mary suffered a head injury in a car accident last week. Since that time, she is able to speak fluently but uses the wrong words when expressing herself. Mary may be exhibiting _____ aphasia.

a) Broca's

Incorrect. Someone with Broca's aphasia has halting speech and mispronounces words but does not use the wrong words.

b) Gall's

c) Wernicke's

Correct. Someone with Wernicke's aphasia often uses the wrong words.

d) Korsakoff's

Topic: From the Bottom Up: The Structures of the Brain

ANS: c, Apply What You Know, 2 - Moderate, LO=2.13 - Identify the parts of the cortex are responsible for higher forms of thought, such as language

APA=1.1, 1.3

TB_02_204 From the Bottom Up: The Structures of the Brain_Apply_LO=2.13, APA 1.1, 1.3

Robert's mother is usually meticulous in her presentation. When picking her up for a family dinner, he noticed that her makeup was only applied to the right side of her face. Her hair was also brushed on the right side, but on the left it was matted and uncombed. He immediately took her to the hospital after she was unaware of any problems. She was diagnosed with _____, which is evidenced by damage to the association areas of the right hemisphere.

a) Wernicke's aphasia

b) Broca's aphasia

Incorrect. If her speech were affected, this could be the possible cause.

c) spatial neglect

Correct. This would be the cause of her attention to the right side of her body and neglecting the left.

d) split-brain

Topic: From the Bottom Up: The Structures of the Brain

ANS: c, Apply What You Know, 3 - Difficult, LO=2.13 - Identify the parts of the cortex are responsible for higher forms of thought, such as language

APA=1.1, 1.3

Learning Objective 2.14 - Explain how some brain functions differ between the left and right hemispheres.

TB_02_205 From the Bottom Up: The Structures of the Brain_Remember_LO=2.14, APA 1.1
Which of the following is the upper part of the brain consisting of two cerebral hemispheres and the structures that connect them?

a) occipital lobe
b) cerebrum

Correct. The cerebrum consists of the two cerebral hemispheres and the structures that connect them.

c) corpus callosum
d) cerebellum

Incorrect. The cerebellum is at the base of the skull, not the upper part of the brain.

Topic: From the Bottom Up: The Structures of the Brain
ANS: b, Remember the Facts, 3 - Difficult, LO=2.14 - Explain how some brain functions differ between the left and right hemispheres
% correct 41 a= 2 b= 41 c= 40 d= 18 *r* = .35
APA=1.1

TB_02_206 From the Bottom Up: The Structures of the Brain_Apply_LO=2.14, APA 1.1
Since Norma is a split-brain patient, we can infer that she likely has a history of _____.

a) mental illness
b) severe epilepsy

Correct. Severe epilepsy is one of the very few medical conditions that is treated by using a split-brain procedure.

c) anosognosia
d) frontal lobe damage

Incorrect. Split-brain procedures are not used to treat frontal lobe damage; in fact, it would make no sense at all to use this procedure for this type of medical problem.

Topic: From the Bottom Up: The Structures of the Brain
ANS: b, Apply What You Know, 1 - Easy, LO=2.14 - Explain how some brain functions differ between the left and right hemispheres
APA=1.1

TB_02_207 From the Bottom Up: The Structures of the Brain_Apply_LO=2.14, APA 1.1, 1.3
Pat has decided to undergo surgery to treat her severe epilepsy. Consequently, her doctors will use a surgical procedure in which they will sever her _____.

a) parietal lobe
b) corpus callosum

Correct. The corpus callosum is the thick band of axons that connects the left and right cerebral hemispheres. It is what is severed during a split-brain procedure to treat severe epilepsy.

c) cerebral cortex
d) subcortical structure

Incorrect. In order to treat severe epilepsy, the corpus callosum is cut in a split-brain procedure. This is a last treatment effort and is only done in the most serious cases.

Topic: From the Bottom Up: The Structures of the Brain
ANS: b, Apply What You Know, 2 - Moderate, LO=2.14 - Explain how some brain functions differ between the left and right hemispheres
APA=1.1, 1.3

TB_02_208 From the Bottom Up: The Structures of the Brain_Remember_LO=2.14, APA 1.2
Researcher Roger Sperry won a Nobel Prize for his research on epilepsy. Sperry cut through the _____, which joins the two hemispheres of the brain.

a) medulla
b) pons
c) pituitary gland

Incorrect. This part of the brain is not severed in split-brain individuals.

d) corpus callosum

Correct. This part of the brain is severed, creating "two brains in one body."
Topic: From the Bottom Up: The Structures of the Brain
ANS: d, Remember the Facts, 1 - Easy, LO=2.14 - Explain how some brain functions differ between the left and right hemispheres
% correct 82 a= 11 b= 5 c= 2 d= 82 *r* = .38
APA=1.2

TB_02_209 From the Bottom Up: The Structures of the Brain_Understand_LO=2.14, APA 1.1
Traditionally, many have made the analogy that the left brain is to the right brain as _____.

a) logical is to artistic

Correct. Though recent research suggests that this analogy may not be completely accurate, it is what most people have believed about the brain for many years.

b) verbal is to analytical
c) intuitive is to perceptual

Incorrect. Traditionally, the left brain has been thought of as analytical, and the right brain has been thought of as perceptual.

d) intuitive is to analytical

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Understand the Concepts, 2 - Moderate , LO=2.14 - Explain how some brain functions differ between the left and right hemispheres
APA=1.1

TB_02_210 From the Bottom Up: The Structures of the Brain_Apply_LO=2.14, APA 1.1
If Darren's brain is like that of most people, then language will be handled by his _____.

a) corpus callosum
b) occipital lobe
c) right hemisphere

Incorrect. The right hemisphere does not control language for most people.

d) left hemisphere

Correct. For most people, the left hemisphere controls language.

Topic: From the Bottom Up: The Structures of the Brain
ANS: d, Apply What You Know, 2 - Moderate, LO=2.14 - Explain how some brain functions differ between the left and right hemispheres
APA=1.1

TB_02_211 From the Bottom Up: The Structures of the Brain_Understand_LO=2.14, APA 1.1
Which of the following is a function of the right hemisphere?

a) perception, recognition of emotion, and recognition of patterns

Correct. These are functions of the right hemisphere.

b) sense of time and rhythm
c) speech, handwriting, and calculation
d) language processing in most individuals

Incorrect. This is a function of the left hemisphere.

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Understand the Concepts, 2 - Moderate, LO=2.14 - Explain how some brain functions differ between the left and right hemispheres
APA=1.1

TB_02_212 From the Bottom Up: The Structures of the Brain_Remember_LO=2.14, APA 1.1
Which is not a specific function of the left hemisphere of the brain?

a) spoken language
b) written language
c) mathematical calculations

Incorrect. This is controlled by the left hemisphere.

d) pattern recognition

Correct. This is controlled by the right hemisphere.
Topic: From the Bottom Up: The Structures of the Brain
ANS: d, Remember the Facts, 1 - Easy, LO=2.14 - Explain how some brain functions differ between the left and right hemispheres
APA=1.1

TB_02_213 From the Bottom Up: The Structures of the Brain_Remember_LO=2.14, APA 1.1
Which is NOT a specific function of the right hemisphere of the brain?

a) nonverbal
b) analysis of detail

Correct. This is controlled by the left hemisphere.

c) music and artistic expression
d) emotional thought and recognition

Incorrect. This is controlled by the right hemisphere.
Topic: From the Bottom Up: The Structures of the Brain
ANS: b, Remember the Facts, 1 - Easy, LO=2.14 - Explain how some brain functions differ between the left and right hemispheres
APA=1.1

Learning Objective 2.15 - Identify some potential causes of attention-deficit/hyperactivity disorder.

TB_02_214 Applying Psychology to Everyday Life_Apply_LO=2.15, APA 1.1, 1.3
Adironke has recently been diagnosed with attention-deficit/hyperactivity disorder (ADHD). Her psychiatrist tells her that there are several different brain areas that might contribute to her various symptoms. Which of the following would the psychiatrist be unlikely to name as an involved brain structure?

a) the cerebellum
b) the basal ganglia
c) the striate nucleus

Correct. There is no research implicating this brain structure in bipolar disorder.

d) the corpus callosum

Incorrect. The brain structure that joins the right and left hemispheres has been found to play a role in bipolar disorder.
Topic: Applying Psychology to Everyday Life
ANS: c, Apply What You Know, 2 - Moderate, LO=2.15 - Identify some potential causes of attention-deficit/hyperactivity disorder
APA=1.1, 1.3

TB_02_215 Applying Psychology to Everyday Life_Remember_LO=2.15, APA 1.1
Which of the following cognitive abilities has been found to be normal in people diagnosed with attention-deficit/hyperactivity disorder?

a) some aspects of attention

Correct. Research has found that some aspects of attention are actually normal in individuals with ADHD.

b) vigilance (watching out for something important)

Incorrect. Vigilance is one aspect of attention that is impaired in many individuals with ADHD.

c) staying on-task
d) engaging in self-control

Topic: Applying Psychology to Everyday Life
ANS: a, Remember the Facts, 3 - Difficult, LO=2.15 - Identify some potential causes of attention-deficit/hyperactivity disorder
APA=1.1

TRUE OR FALSE

TB_02_216 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
The axon receives messages from other neurons.
Topic: Neurons and Nerves: Building the Network
ANS: F, Remember the Facts, 1 - Easy, LO=2.1 - Identify the parts of a neuron and describe the function of each
APA=1.1

TB_02_217 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
Glial cells provide structure for neurons.
Topic: Neurons and Nerves: Building the Network
ANS: T, Remember the Facts, 2 - Moderate, LO=2.1 - Identify the parts of a neuron and describe the function of each
APA=1.1

TB_02_218 Neurons and Nerves: Building the Network_Understand_LO=2.1, APA 1.1
Myelin not only insulates the neuron, it also slows down the neural message helping with transmission of messages traveling down the axon.
Topic: Neurons and Nerves: Building the Network
ANS: F, Understand the Concepts, 3 - Difficult, LO=2.1 - Identify the parts of a neuron and describe the function of each
APA=1.1

TB_02_219 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
Cell membranes are semipermeable.
Topic: Neurons and Nerves: Building the Network
ANS: T, Remember the Facts, 2 - Moderate, LO=2.1 - Identify the parts of a neuron and describe the function of each
APA=1.1

TB_02_220 Neurons and Nerves: Building the Network_Remember _LO=2.1, APA 1.1
Neurons that are at rest are still electrically charged.
Topic: Neurons and Nerves: Building the Network
ANS: T, Remember the Facts, 3 - Difficult, LO=2.1 - Identify the parts of a neuron and describe the function of each
APA=1.1

TB_02_221 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
During a resting potential, the neuron is positively charged inside and negatively charged outside.
Topic: Neurons and Nerves: Building the Network
ANS: F, Remember the Facts, 2 - Moderate, LO=2.1 - Identify the parts of a neuron and describe the function of each
APA=1.1

TB_02_222 Neurons and Nerves: Building the Network_Understand_LO=2.3, APA 1.1
A synapse is like a locked door that only certain neurotransmitter keys can unlock.
Topic: Neurons and Nerves: Building the Network
ANS: F, Understand the Concepts, 3 - Difficult, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
APA=1.1

TB_02_223 Neurons and Nerves: Building the Network_Remember_LO=2.3, APA 1.1
Acetylcholine is an agonist or an excitatory neurotransmitter also found in a part of the brain responsible for forming new memories and stimulating muscle contraction.

Topic: Neurons and Nerves: Building the Network
ANS: T, Remember the Facts, 3 - Difficult, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
APA=1.1

TB_02_224 The Central Nervous System—The "Central Processing Unit"_Remember_LO=2.4, APA 1.1
One function of the nervous system is to send information to and receive information from all parts of the body.
Topic: The Central Nervous System—The "Central Processing Unit"
ANS: T, Remember the Facts, 1 - Easy, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
APA=1.1

TB_02_225 The Central Nervous System—The "Central Processing Unit"_Remember_LO=2.4, APA 1.1
The central nervous system consists of the brain and spinal cord.
Topic: The Central Nervous System—The "Central Processing Unit"
ANS: T, Remember the Facts, 1 - Easy, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity APA=1.1

TB_02_226 The Central Nervous System—The "Central Processing Unit"_Remember_LO=2.4, APA 1.1
Motor neurons carry messages from special receptors in the skin, from muscles, and from sense organs to the spinal cord.
Topic: The Central Nervous System—The "Central Processing Unit"
ANS: F, Remember the Facts, 2 - Moderate, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
APA=1.1

TB_02_227 The Central Nervous System—The "Central Processing Unit"_Remember_LO=2.4, APA 1.1
Interneurons connect sensory neurons to the motor neurons.
Topic: The Central Nervous System—The "Central Processing Unit"
ANS: T, Remember the Facts, 1 - Easy, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
APA=1.1

TB_02_228 The Central Nervous System—The "Central Processing Unit"_Remember_LO=2.4, APA 1.1
Neuroplasticity is the concept that when the brain is injured, it is unable to change the structure and function of the cells to adjust to the damage.
Topic: The Central Nervous System—The "Central Processing Unit"
ANS: F, Remember the Facts, 2 - Moderate, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
APA=1.1

TB_02_229 The Central Nervous System—The "Central Processing Unit"_Remember_LO=2.4, APA 1.1
Stem cells can become other cells, such as blood cells, nerve cells, and brain cells.
Topic: The Central Nervous System—The "Central Processing Unit"
ANS: T, Remember the Facts, 3 - Difficult, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
APA=1.1

TB_02_230 The Peripheral Nervous System—Nerves on the Edge_Remember_LO=2.5, APA 1.1
The somatic nervous system is made up of nerves carrying messages from the central nervous system to the muscles of the body.
Topic: The Peripheral Nervous System—Nerves on the Edge
ANS: T, Remember the Facts, 2 - Moderate, LO=2.5 - Describe the role of the somatic and autonomic nervous systems
APA=1.1

TB_02_231 The Peripheral Nervous System—Nerves on the Edge_Remember_LO=2.5, APA 1.1
Activation of the sympathetic nervous system leads to pupil dilation, inhibition of digestion, and an accelerated heartbeat.
Topic: The Peripheral Nervous System—Nerves on the Edge
ANS: T, Remember the Facts, 3 - Difficult, LO=2.5 - Describe the role of the somatic and autonomic nervous systems
APA=1.1

TB_02_232 Distant Connections: The Endocrine Glands_Remember_LO=2.6, APA 1.1
Endocrine glands secrete chemicals directly into the body's tissues through ducts.
Topic: Distant Connections: The Endocrine Glands
ANS: F, Remember the Facts, 1 - Easy, LO=2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior
APA=1.1

TB_02_233 Distant Connections: The Endocrine Glands_Remember_LO=2.6, APA 1.1
The pineal gland secrets a hormone called insulin.
Topic: Distant Connections: The Endocrine Glands
ANS: F, Remember the Facts, 2 - Moderate, LO=2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior
APA=1.1

TB_02_234 Distant Connections: The Endocrine Glands_Remember_LO=2.6, APA 1.1
The thyroid gland secretes a hormone called thyroxin.
Topic: Distant Connections: The Endocrine Glands
ANS: T, Remember the Facts, 2 - Moderate, LO=2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior APA=1.1

TB_02_235 Distant Connections: The Endocrine Glands_Remember_LO=2.6, APA 1.1
If the pancreas secretes too little insulin, the result is diabetes.
Topic: Distant Connections: The Endocrine Glands
ANS: T, Remember the Facts, 3 - Difficult, LO=2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior APA=1.1

TB_02_236 Distant Connections: The Endocrine Glands_Remember_LO=2.6, APA 1.1
If the body secretes too much insulin, the result is hyperglycemia.
Topic: Distant Connections: The Endocrine Glands
ANS: F, Remember the Facts, 3 - Difficult, LO=2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior APA=1.1

TB_02_237 Distant Connections: The Endocrine Glands_Understand_LO=2.7, APA 1.1
When the body's resources are gone, the parasympathetic nervous system activates and the individual is in the resistance stage of the general adaptation syndrome.
Topic: Distant Connections: The Endocrine Glands
ANS: F, Understand the Concepts, 2 - Moderate, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress.
APA=1.1

TB_02_238 Distant Connections: The Endocrine Glands_Remember_LO=2.7, APA 1.1
Research reveals that there is a relationship between prolonged stress and certain diseases of adaptation such as high blood pressure and ulcers.
Topic: Distant Connections: The Endocrine Glands
ANS: T, Remember the Facts, 2 - Moderate, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress.
APA=1.1

TB_02_239 Distant Connections: The Endocrine Glands_Remember_LO=2.7, APA 1.1

The field of psychoneuroimmunology studies the effects of psychological factors, such as stress, emotions, thinking, and behavior on the immune system.
Topic: Distant Connections: The Endocrine Glands
ANS: T, Remember the Facts, 1 - Easy, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress.
APA=1.1

TB_02_240 Looking Inside the Living Brain_Remember_LO=2.9, APA 1.1
Positron-emission tomography (PET scan) is a brain-imaging method using radio waves and magnetic fields of the body to produce detailed images of the brain.
Topic: Looking Inside the Living Brain
ANS: F, Remember the Facts, 3 - Difficult, LO=2.9 - Describe how neuroimaging techniques can provide information about the brain's structure and function
APA=1.1

TB_02_241 Looking Inside the Living Brain_Remember_LO=2.10, APA 1.1
The medulla is responsible for people's ability to selectively attend to certain kinds of information in their surroundings.
Topic: Looking Inside the Living Brain
ANS: F, Remember the Facts, 2 - Moderate, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
APA=1.1

TB_02_242 Looking Inside the Living Brain_Understand_LO=2.10, APA 1.1
The cortex "wrinkles" as a result of fluid filling the brain over the lifespan.
Topic: Looking Inside the Living Brain
ANS: F, Understand the Concepts, 1 - Easy, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
APA=1.1

TB_02_243 Looking Inside the Living Brain_Remember_LO=2.10, APA 1.1
The cerebrum is divided into two hemispheres that control opposite sides of the body.
Topic: Looking Inside the Living Brain
ANS: T, Remember the Facts, 1 - Easy, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
APA=1.1

TB_02_244 Looking Inside the Living Brain_Remember_LO=2.10, APA 1.1
The occipital lobes contain the visual cortex, where visual signals are processed.
Topic: Looking Inside the Living Brain
ANS: T, Remember the Facts, 2 - Moderate, LO=2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each
APA=1.1

TB_02_245 Looking Inside the Living Brain_Understand_LO=2.11, APA 1.1
A person who suffered brain damage is likely to have problems controlling his emotions as a result of damage with the connection from the temporal lobe to the limbic system.
Topic: Looking Inside the Living Brain
ANS: F, Understand the Concepts, 3 - Difficult, LO=2.11 - Identify the structures of the brain that control emotion, learning, memory, and motivation
APA=1.1

TB_02_246 From the Bottom Up: The Structures of the Brain_Remember_LO=2.12, APA 1.1
Researchers in the field of autism are considering that lack of empathy is related to a faulty mirror system in the brain.
Topic: From the Bottom Up: The Structures of the Brain
ANS: T, Remember the Facts, 3 - Difficult, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
APA=1.1

TB_02_247 From the Bottom Up: The Structures of the Brain_Remember_LO=2.14, APA 1.1
The cerebral cortex is severed in individuals who are considered to have a "split brain" after a surgery to stop epileptic seizures.
Topic: From the Bottom Up: The Structures of the Brain
ANS: F, Remember the Facts, 3 - Difficult, LO=2.14 - Explain how some brain functions differ between the left and right hemispheres
APA=1.1

SHORT ANSWER

TB_02_248 Neurons and Nerves: Building the Network_Remember_LO=2.1, 2.2, APA 1.1
List three main parts of the human neuron and explain the role each plays in the transmission of neural communication.
Topic: Neurons and Nerves: Building the Network
Remember the Facts, 3 - Difficult, LO=2.1 - Identify the parts of a neuron and describe the function of each & 2.2 – Describe the action potential
APA=1.1

TB_02_249 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
List two different functions of glial cells.
Topic: Neurons and Nerves: Building the Network
Remember the Facts, 2 - Moderate, LO=2.1 - Identify the parts of a neuron and describe the function of each
APA=1.1

TB_02_250 Neurons and Nerves: Building the Network_Remember_LO=2.1, APA 1.1
What is a synapse?
Topic: Neurons and Nerves: Building the Network
Remember the Facts, 1 - Easy, LO=2.1 - Identify the parts of a neuron and describe the function of each
APA=1.1

TB_02_251 Neurons and Nerves: Building the Network_Remember_LO=2.3, APA 1.1
What are neurotransmitters?
Topic: Neurons and Nerves: Building the Network
Remember the Facts, 1 - Easy, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body APA=1.1

TB_02_252 Neurons and Nerves: Building the Network_Remember_LO=2.3, APA 1.1
Name three neurotransmitters and identify their specific functions.

Topic: Neurons and Nerves: Building the Network
Remember the Facts, 2 - Moderate, LO=2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body
APA=1.1

TB_02_253 The Central Nervous System—The "Central Processing Unit"_Remember_LO=2.4, 2.5, APA 1.1
Explain the difference between the Central Nervous System (CNS) and the Peripheral Nervous System (PNS).
Topic: The Central Nervous System—The "Central Processing Unit"
Remember the Facts, 1 - Easy, LO=2.4 – Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity & 2.5 - Describe the role of the somatic and autonomi c nervous systems
APA=1.1

TB_02_254 The Peripheral Nervous System—Nerves on the Edge_Remember_LO=2.5, APA 1.1
What is the difference between the sympathetic and parasympathetic nervous systems?
Topic: The Peripheral Nervous System—Nerves on the Edge
Remember the Facts, 2 - Moderate, LO=2.5 - Describe the role of the somatic and autonomic nervous systems
APA=1.1

TB_02_255 Distant Connections: The Endocrine Glands_Remember_LO=2.6, APA 1.1
Name two hormones that are of particular interest to psychologists and state the gland to which they are related. Then name some of the tasks that these hormones perform.
Topic: Distant Connections: The Endocrine Glands
Remember the Facts, 3 - Difficult, LO=2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior
APA=1.1

TB_02_256 Distant Connections: The Endocrine Glands_Remember_LO=2.7, APA 1.1
What are the two parts of the nervous system that are activated during the general adaptation syndrome? Which part is activated during each of the three stages?
Topic: Distant Connections: The Endocrine Glands
Remember the Facts, 3 - Difficult, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress.
APA=1.1

TB_02_257 Distant Connections: The Endocrine Glands_Remember_LO=2.7, APA 1.1
List three types of physical illnesses that can be exacerbated by the presence of chronically elevated stress.
Topic: Distant Connections: The Endocrine Glands
Remember the Facts, 1 - Easy, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress.
APA=1.1

TB_02_258 From the Bottom Up: The Structures of the Brain_Understand_LO=2.12, APA 1.1
Why is the cortex in the brain so wrinkled?
Topic: From the Bottom Up: The Structures of the Brain
Understand the Concepts, 1 - Easy, LO=2.12 - Identify the parts of the cortex that control the different senses and the movement of the body
APA=1.1

TB_02_259 From the Bottom Up: The Structures of the Brain_Remember_LO=2.13, APA 1.1
What are the symptoms of Broca's aphasia?
Topic: From the Bottom Up: The Structures of the Brain
Remember the Facts, 3 - Difficult, LO=2.13 - Identify the parts of the cortex that are responsible for higher forms of thought, such as language
APA=1.1

TB_02_260 From the Bottom Up: The Structures of the Brain_Remember_LO=2.13, APA 1.1
What are the symptoms of Wernicke's aphasia?
Topic: From the Bottom Up: The Structures of the Brain
Remember the Facts, 3 - Difficult , LO=2.13 - Identify the parts of the cortex that are responsible for higher forms of thought, such as language
APA=1.1

TB_02_261 From the Bottom Up: The Structures of the Brain_Remember_LO=2.14, APA 1.2
Briefly explain Roger Sperry's split-brain research.
Topic: From the Bottom Up: The Structures of the Brain
Remember the Facts, 2 - Moderate, LO=2.14 - Explain how some brain functions differ between the left and right hemispheres
APA=1.2

TB_02_262 From the Bottom Up: The Structures of the Brain_Remember_LO=2.14, APA 1.1
What are the differences in how the right and left cerebral hemispheres function?
Topic: From the Bottom Up: The Structures of the Brain
Remember the Facts, 3 - Difficult, LO=2.14 - Explain how some brain functions differ between the left and right hemispheres
APA=1.1

ESSAY

TB_02_263 Neurons and Nerves: Building the Network_Remember_LO=2.1, 2.2, APA 1.1
What is a neuron? Describe the major parts of a neuron and their functions. Explain the process of how a neural message is transmitted from the end of one neuron to the beginning of another and the process by which a neuron moves from a resting state (resting potential) to firing (action potential) and then back to a resting state.
Topic: Neurons and Nerves: Building the Network
Remember the Facts, 2 - Moderate, LO=2.1– Identify the parts of a neuron and describe the function of each & 2.2 - Describe the action potential
APA=1.1

TB_02_264 The Central Nervous System—The "Central Processing Unit"_Remember_LO=2.4, APA 1.1
Describe the functions of the brain and the spinal cord. How are these functions similar? How are these functions dissimilar?
Topic: The Central Nervous System—The "Central Processing Unit"
Remember the Facts, 3 - Difficult, LO=2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity
APA=1.1

TB_02_265 The Peripheral Nervous System—Nerves on the Edge_Remember_LO=2.5, APA 1.1
What are the primary functions of the sympathetic and parasympathetic components of the peripheral nervous system? Describe a situation or experience in which activation of the sympathetic and parasympathetic divisions has occurred.
Topic: The Peripheral Nervous System—Nerves on the Edge
Remember the Facts, 2 - Moderate, LO=2.5 - Describe the role of the somatic and autonomic nervous systems
APA=1.1

TB_02_266 Distant Connections: The Endocrine Glands_Understand_LO=2.6, APA 1.1
How does the endocrine system influence behavior? Describe the functions of three glands and the hormones each secretes.
Topic: Distant Connections: The Endocrine Glands
Understand the Concepts, 2 - Moderate, LO=2.6 - Explain how the hormones released by glands interact with

the nervous system and affect behavior
APA=1.1

TB_02_267 Distant Connections: The Endocrine Glands_Remember_LO=2.7, APA 1.1

Describe the stages of the general adaptation syndrome. What problems occur with continued exposure to stress?
Topic: Distant Connections: The Endocrine Glands
Remember the Facts, 1 - Easy, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress.
APA=1.1

TB_02_268 Distant Connections: The Endocrine Glands_Apply_LO=2.7, APA 1.1, 1.3
Compare the general adaptation syndrome to a group of volunteer firefighters sitting around their station house when a fire call comes in. Describe how the stages might be reflected in the actions or characteristics of the firefighters.
Topic: Distant Connections: The Endocrine Glands
Apply What You Know, 2 - Moderate, LO=2.7 - Describe how the autonomic nervous system and body are impacted by stress.
APA=1.1, 1.3

TB_02_269 Looking Inside the Living Brain_Remember_LO=2.9, APA 2.4
Choose any three methods that psychologists use to learn about the functions of the brain. Describe the method, how it works, and the type of information we can learn from it.
Topic: Looking Inside the Living Brain
Remember the Facts, 2 - Moderate, LO=2.9 - Describe how neuroimaging techniques can provide information about the brain's structure and function
APA=2.4

TB_02_270 From the Bottom Up: The Structures of the Brain_Remember_LO=2.14, APA 1.1
Discuss hemispheric specialization in terms of the functions most commonly handled by the left and right sides of the cerebral cortex.
Topic: From the Bottom Up: The Structures of the Brain
Remember the Facts, 3 - Difficult, LO=2.14 - Explain how some brain functions differ between the left and right hemispheres
APA=1.1

QUESTIONS FROM THE TEXTBOOK

END OF CHAPTER TEXTBOOK QUESTIONS

***PSYCHOLOGY: An Exploration*, 3e Ciccarelli and White**

Chapter 2 The Biological Perspective

PRACTICE QUIZ: How Much Do You Remember?

2.1, 2.2

1. Which part of the neuron carries messages to other cells?

   a. axon c. soma

   b. dendrite d. myelin

Answer: A

2. Which one of the following is NOT a function of glial cells?

   a. getting nutrients to the neurons

   b. generating action potentials

   c. cleaning up the remains of dead neurons

   d. providing insulation

Answer: B

3. When a neuron's resting potential is occurring, the neuron is _____ charged on the inside.

   a. positively c. both positively and negatively

   b. negatively d. neutrally

Answer: B

4. Neurotransmitters must pass from an axon terminal to the next dendrite by crossing a

fluid-filled space called the

a. synaptic gap. c. neuron.

b. reuptake inhibitor. d. glial cell.

Answer: A

5. The venom of a black widow spider acts like a(n) _____ by mimicking the effects of acetylcholine.

a. agonist c. protagonist

b. antagonist d. glial cell

Answer: A

6. Which of the following is associated with pain relief?

a. acetylcholine c. serotonin

b. glutamate d. endorphins

Answer: D

PRACTICE QUIZ: How Much Do You Remember?

2.3, 2.4, 2.5

1. If you touch a hot stove, your spinal cord can prompt you to withdraw your hand without having to send the message all the way to the brain. This is due to what scientists call

a. the reflex arc.

b. neuroplasticity.

c. the parasympathetic nervous system.

d. the sympathetic nervous system.

Answer: A

2. What is the process whereby the structure and function of brain cells change in response to trauma, damage, or even learning?

a. shallow lesioning

b. deep lesioning

c. cell regeneration

d. neuroplasticity

Answer: D

3. The neurons of the sensory pathway contain

a. efferent neurons.

b. afferent neurons.

c. both efferent and afferent neurons.

d. voluntary muscle fibers.

Answer: B

4. Andrew has always been thin. In fact, he often seems to be able to eat whatever he wants without gaining weight. The doctor told his parents that Andrew's _____ gland is the cause of his fast metabolism.

a. pituitary

b. adrenal

c. thyroid

d. pancreas

Answer: C

5. This stage of the general adaptation syndrome is accompanied by activation of the sympathetic nervous system.

a. alarm

b. resistance

c. exhaustion

d. termination

Answer: A

6. Typically, the immune-system response to stress is effective as long as

a. the stressor is eustress.

b. the stressor is not continuous or chronic.

c. the stressor is not a virus.

d. the stressor is not a bacteria

Answer: B

PRACTICE QUIZ: How Much Do You Remember?

2.6, 2.7, 2.8

1. Which of the following techniques analyzes blood oxygen levels to look at the functioning of the brain?

a. EEG

b. CT

c. fMRI

d. PET

Answer: D

2. Which brain structure allows us to pay attention to certain stimuli while ignoring others?

a. medulla

b. cerebellum

c. reticular formation

d. pons

Answer: C

3. Which brain structure relays incoming sensory information?

a. thalamus

b. hypothalamus

c. reticular formation

d. pons

Answer: A

4. If you were to develop a rare condition in which you were not able to remember to be afraid of certain situations, animals, or events, which part of the brain would most likely be damaged?

a. cingulate cortex

b. hypothalamus

c. thalamus

d. amygdala

Answer: D

5. If your roommate has a problem paying attention, it may be due to damage to this part of the limbic system.

a. hippocampus

b. hypothalamus

c. cerebellum

d. cingulate cortex

Answer: D

PRACTICE QUIZ: How Much Do You Remember?

2.9, 2.10, 2.11

1. What part of the brain can sometimes be referred to as the “rind” or outer covering?

   a. thalamus

   b. medulla

   c. corpus callosum

   d. cortex

Answer: D

2. In which of the following lobes of the cortex would you find the primary visual cortex?

   a. frontal

   b. temporal

   c. occipital

   d. parietal

Answer: C

3. The ability to detect changes in temperature, pressure, and body position is due in part to the functions of the _____ lobe.

   a. frontal c. temporal

   b. parietal d. corpus

Answer: B

4. You have a dream in which you wake up to find that people around you are using words that make no sense. What’s more, your friends don’t seem to understand you when you speak.

At one point in your dream, your mom tells you that you almost forgot your tree limb today. When you give her a puzzled look, she holds up your lunchbox and repeats, "You know, your tree limb." Your predicament in your dream is most like which of the following disorders?

a. Wernicke's aphasia c. apraxia

b. Broca's aphasia d. spatial neglect

Answer: A

5. Which part of the brain tends to process information globally?

a. left hemisphere

b. right hemisphere

c. corpus callosum

d. cerebellum

Answer: B

THINKING CRITICALLY:

Phineas Gage went from a mild-mannered railroad worker to a short-tempered and highly aggressive individual after a spike was driven through his frontal lobe. Discuss the extent to which his injuries and subsequent behavior change were a result of the biological changes or if they could be due to other "social" causes.

END OF CHAPTER TEXTBOOK QUESTIONS

***PSYCHOLOGY*, 3e Ciccarelli and White**

Chapter 2 The Biological Perspective

TEST YOURSELF

1. In the structure of the neuron, the _____ receives messages from other cells.

   a. axon c. soma

   b. dendrite d. myelin

Answer: B

2. Oligodendrocytes and Schwann cells generate a fatty substance known as

   a. glial. c. myelin.

   b. soma. d. neurilemma.

Answer: C

3. Which of the following insulates and protects a neuron's axon, as well as helps to speed along electrical impulses?

   a. synaptic knobs c. myelin sheath

   b. receptor sites d. neuromodulators

Answer: C

4. When a neuron is in the resting potential state, the neuron is negatively charged on the _____ and positively charged on the _____.

   a. inside; outside c. top; bottom

   b. outside; inside d. bottom; top

Answer: A

5. Which neurotransmitter stimulates muscle cells to contract but slows contractions in the heart?

a. acetylcholine c. serotonin

b. GABA d. endorphin

Answer: A

6. Heroin mimics the actions of endorphins, inhibiting pain signals and creating a "high" feeling. Heroin is an example of a(n):

a. protagonist. c. agonist.

b. antagonist. d. glial cell.

Answer: C

7. Involuntary muscles are controlled by the _____ nervous system.

a. somatic c. sympathetic

b. autonomic d. parasympathetic

Answer: B

8. As you take notes, your heart beats at a normal rate. Your breathing is normal and your stomach slowly digests your earlier meal. What division of the peripheral nervous is currently in action?

a. sympathetic c. autonomic

b. parasympathetic d. somatic

Answer: B

9. Robert has had difficulty sleeping for the past 6 months and his body seemingly no longer differentiates between night and day. His doctor believes the problem lies with Robert's endocrine system. What gland will Robert's physician focus on?

a. pituitary c. thyroid

b. adrenal d. pineal

Answer: D

10. Which gland(s) is/are known to influence all other glands within the endocrine system?

a. pineal gland c. thyroid gland

b. pituitary gland d. adrenal glands

Answer: B

11. Bailey is a subject in a study on memory and problem solving. The researcher is applying magnetic pulses to her brain through copper wire coils positioned directly above her scalp. Bailey's study would best be described as a(n)

a. invasive stimulation technique.

b. noninvasive stimulation technique.

c. EEG technique.

d. PET technique.

Answer: B

12. Which technique of studying the brain involves injecting the patient with radioactive glucose?

a. EEG c. MRI

b. CT d. PET

Answer: D

13. Maria often sleeps soundly and rarely awakens to any outside noise. However, the cries of Maria's baby can awaken her immediately. What part of the brain is responsible for this reaction?

a. medulla c. reticular formation

b. pons d. cerebellum

Answer: C

14. Alexis and Theresa are synchronized swimmers for their college swim team. They often work long hours to ensure the movements in their routine are perfectly timed. What part of their brains must Alexis and Theresa rely most upon?

a. medulla c. reticular formation

b. pons d. cerebellum

Answer: D

15. Your psychology professor refers to this as the great relay station of the brain. To what part of the brain is she referring?

a. thalamus c. hippocampus

b. hypothalamus d. amygdala

Answer: A

16. Which part of the brain is involved in the creation of memories and is often linked to Alzheimer's disease?

a. hippocampus

b. thalamus

c. hypothalamus

d. amygdala

Answer: A

17. Jessica has suffered a severe blow to the back of her head when she was thrown from her horse. Subsequently, her occipital lobe has been injured. Which of her senses has the highest

chance of being affected?

a. hearing

b. touch

c. taste and smell

d. vision

Answer: D

18. Jaime's grandfather recently suffered a stroke and has had difficulty with language production ever since. Most likely, he has experienced damage to the _____ area of his brain.

a. right rear

b. left frontal

c. left rear

d. right frontal

Answer: B

19. Felicia is recovering from a brain injury. She is able to speak fluently but often uses incorrect words in a sentence. In one instance at a friend's birthday party, she said, "I would like something to drink. Can I have some battery?" Felicia's problem is known as

a. spatial neglect.

b. visual agnosia.

c. Broca's aphasia.

d. Wernicke's aphasia.

Answer: D

20. Although the brain works largely as a whole, which of the following is not a correct

pairing of hemisphere and function?

a. left; control of right-handed motor functions

b. right; control of right-handed motor functions

c. right; recognition of faces

d. left; reading

Answer: B

EXTRA BANK OF QUESTIONS

2: THE BIOLOGICAL PERSPECTIVE

Neurons and Nerves: Building the Network

1. A long structure leaving the cell body that action potential travel along is called the _____.
a. cell membrane
b. dendrite
c. axon
d. myelin sheath
Answer c % correct 70 a= 3 b= 16 c= 70 d= 11 *r* = .38

2. Neurons in the brain that carry messages from one neuron to another and do most of the work of the nervous system are called _____.
a. afferent neurons
b. active neurons
c. efferent neurons
d. interneurons
Answer d % correct 42 a= 25 b= 14 c= 19 d= 42 *r* = .42

3. Physiological psychologists study _____.
a. human mental and physical growth from the prenatal period through childhood, adolescence, adulthood, and old age
b. the biological basis for human behavior.
c. the differences among individuals in such traits as anxiety, sociability, self-esteem, the need for achievement, and aggressiveness
d. how people influence one another
Answer b % correct 49 a= 26 b= 49 c= 20 d= 5 *r* = .42

4. The short fibers which extend from the neurons allowing it to receive messages from other neurons are
a. axons
b. dendrites
c. nerve bundles
d. synapses
Answer b % correct 79 a= 19 b= 79 c= 1 d= 1 *r* = .38

5. A young man reads in a letter that he has just won $1,000 in a state-wide lottery and he literally jumps for joy. Which neurons are sending messages from his brain to his legs ordering them to jump?
a. sensory neurons
b. motor neurons
c. interaction neurons
d. association neurons
Answer b % correct 89 a= 4 b= 89 c= 2 d= 4 *r* = .34

6. When the electrical charge inside a neuron is negative in relation to the outside, the neuron is said to be in a state of:
a. equilibrium.
b. shock.
c. polarization.
d. depolarization.
Answer c % correct 81 a= 3 b= 2 c= 73 d= 12 *r* = .27

7. The period in which the neuron begins to pump sodium ions out of the cell and can only fire if the incoming message is extremely powerful is called the
a. absolute refractory period
b. relative refractory period
c. secondary refractory period
d. recovery period
Answer b % correct 64 a= 21 b= 64 c= 8 d= 7 *r* = .53

8. Which of the following neurotransmitters is known for its role in schizophrenia and Parkinson's disease?
a. acetylcholine
b. dopamine
c. serotonin
d. norepinephrine
Answer b % correct 80 a= 11 b= 80 c= 2 d= 7 *r* = .21

9. Endorphins
a. are found where neurons meet skeletal muscles
b. are less powerful than enkaphalins
c. reduce pain messages in the brain
d. are radically different in function from neurotransmitters
Answer c % correct 86 a= 3 b= 3 c= 86 d= 8 *r* = .23

10. Human beings have _____ pairs of chromosomes
a. 12
b. 17
c. 23
d. 45
Answer c % correct 92 a= 3 b= 2 c= 92 d= 3 *r* = .25

11. The part of the neuron that carries outgoing messages either to another neuron or to a muscle or gland is the
a. myelin sheath
b. axon
c. dendrite
d. cell body
Answer b % correct 80 a= 1 b= 80 c= 19 d= 0 *r* = .21

12. The cell body is enclosed by the
a. axon
b. dendrite
c. cell membrane
d. myelin sheath
Answer c % correct 82 a= 3 b= 3 c= 82 d= 13 *r* = .23

13. Which of the following is true of neural impulses in a single neuron?
a. The neuron may fire during the absolute refractory period.

b. The strength of a neural impulse increases as the strength of the incoming message gets stronger.
c. The strength of a neural impulse decreases as the strength of the incoming message gets stronger.
d. The strength of a neural impulse is the same each time the neuron fires.
Answer d % correct 60 a= 6 b= 30 c= 4 d= 60 *r* = .35

14. The three parts of every neuron are:
a. myelin; glia; cell body.
b. dendrite; cell body; axon.
c. glia; dendrite; axon.
d. myelin; cell body; dendrite.
Answer b % correct 83 a= 1 b= 83 c= 3 d= 13 *r* = .23

15. The small gap between adjacent neurons is the:
a. glia.
b. myelin sheath.
c. synaptic cleft.
d. terminal.
Answer c % correct 83 a= 2 b= 6 c= 83 d= 9 *r* = .20

16. The neural impulse traveling down the axon is _____; it gets across the synapse by _____.
a. electrical; remaining electrical but changing from positively charged to negatively charged
b. electrical; remaining electrical but changing from negatively charged to positively charged
c. electrical; being changed into a chemical message
d. chemical; being changed into an electrical message
Answer c % correct 50 a= 13 b= 22 c= 50 d= 13 *r* = .37

17. Neurons are:
a. cells in the brain that are believed to help clean and feed brain cells.
b. cells that send and receive information.
c. bundles of nerves.
d. chemical transmitters found in the hypothalamus.
Answer b % correct 96 a= 0 b= 96 c= 3 d= 1 *r* = .44

18. Axons:
a. receive/detect neural impulses.
b. carry messages away from a cell body.
c. secrete chemicals to lubricate the cell body.
d. are found in the cell body.
Answer b % correct 82 a= 15 b= 82 c= 1 d= 3 *r* = .36

19. The myelin sheath:
a. is a fatty substance protecting the dendrites.
b. helps to speed up neural messages within the cell.
c. is found in all neurons.
d. protects the cell's vesicles.
Answer b % correct 51 a= 30 b= 51 c= 5 d= 14 *r* = .44

20. The basic message-carrying cells of the nervous system are labeled:
a. dendrites.
b. neurons.
c. nerves.
d. ganglia.
Answer b % correct 91 a= 5 b= 91 c= 4 d= 0 *r* = .23

21. What kinds of neurons are connected to receptor cells in the skin, muscles, and joints?
a. peripheral neurons
b. interneurons
c. sensory neurons
d. motor neurons
Answer c % correct 70 a= 3 b= 5 c= 70 d= 22 *r* = .27

22. The human brain contains somewhere between _____ and _____ neurons.
a. 50 million; 100 million
b. 10 million; 20 million
c. 10 billion; 100 billion
d. 2 trillion; 5 trillion
Answer c % correct 80 a= 5 b= 16 c= 80 d= 9 *r* = .24

23. A nerve impulse from one neuron affects the activity of a neighboring neuron at a point of interaction called the:
a. corpuscle.
b. synapse.
c. transmission cleft.
d. neuronal junction.
Answer b % correct 96 a= 0 b= 96 c= 3 d= 1 *r* = .26

24. Assume that you are testing a split-brain human subject whose language center is in his left hemisphere. If you place a house key into his left hand, he will:
a. not be able to later select the object he was holding from a group of various objects.
b. not be able to tell you what object he is presently holding.
c. immediately be able to tell you what he is holding.
d. be able to tell you what he is presently holding if allowed to think about it for several seconds.
Answer b % correct 80 a= 5 b= 80 c= 6 d= 8 *r* = .24

25. Specialized cells in the brain which send and receive information are called:
a. limbic cells.
b. neurons.
c. ganglia
d. gonads.
Answer b % correct 83 a= 15 b= 83 c= 2 d= 0 *r* = .21

26. Our brain contains nerves and _____.
a. neurons.
b. synapse
c. ganglia
d. all of the above
Answer d % correct 82 d= 8 b= 2 c= 8 d= 82 *r* = .29

27. Our brain contains _____.
a. neurons.
b. synapse
c. ganglia
d. all of the above
Answer d % correct 88 a= 1 b= 9 c= 2 d= 88 *r* = .20

28. Axons
a. may be up to a quarter of a mile long.
b. carry messages away from a cell body.
c. are primarily responsible for the hypothalamic functions of regulation and motivation of sexual functions.

d. are contained within the cell nucleus.
Answer b % correct 89 a= 7 b= 89 c= 1 d= 3 *r* = .33

29. Dendrites:
a. may be up to a quarter of a mile long.
b. carry messages to cell bodies.
c. are primarily responsible for the hypothalamic functions of regulation and motivation of sexual functions.
d. are contained within the cell nucleus.
Answer b % correct 82 a= 10 b= 82 c= 4 d= 4 *r* = .26

30. The myelin sheath:
a. is a special substance protecting the dendrites.
b. helps to speed up transmission of neural messages.
c. is responsible for polarization.
d. all of the above
Answer b % correct 71 a= 7 b= 71 c= 0 d= 22 *r* = .54

31. Neural messages travel faster on axons which
a. are polarized.
b. are not exposed to acetylcholine (ACh).
c. are located in the hypothalamus.
d. have a myelin sheath.
Answer d % correct 88 a= 6 b= 2 c= 5 d= 88 *r* = .35

32. Dr. Chapin has just finished a delicate brain operation. He turns to a group of interns and says, "She probably lost about 1000 _____, but since she still has over 100 billion left, she should recover nicely." Dr. Chapin was most likely referring to:
a. parts of the brain.
b. neurons.
c. pituitary glands.
d. speech and language areas.
Answer b % correct 98 a= 1 b= 98 c= 1 d= 0 *r* = .21

33. A synapse is most important in:
a. separating the medulla from the hindbrain.
b. regulating the parasympathetic nervous system.
c. the process of transmitting messages between neurons.
d. connecting the basal ganglia.
Answer c % correct 96 a= 2 b= 2 c= 96 d= 0 *r* = .37

34. The smallest unit in the nervous system is the _____.
a. dendrite
b. neuron
c. axon
d. myelin sheath
Answer b % correct 64 a= 21 b= 64 c= 7 d= 8 *r* = .34

35. The cell which underlies the activity of the entire nervous system is the _____.
a. transmitter cell
b. amoeba
c. neuron
d. carcinoma
Answer c % correct 83 a= 16 b= 0 c= 83 d= 1 *r* = .34

36. There are approximately _____ neurons in the brain of an average human being.
a. 100 thousand
b. 100 million
c. 100 billion
d. 100 trillion
Answer c % correct 76 a= 0 b= 4 c= 76 d= 19 *r* = .30

37. The short fibers which extend from the neuron allowing it to receive messages from other neurons are _____.
a. axons
b. dendrites
c. nerve bundles
d. cell membranes
Answer b % correct 86 a= 1 b= 1 c= 86 d= 12 *r* = .26

38. The part of the neuron that carries outgoing messages either to another neuron or to a muscle or gland is the _____.
a. myelin sheath
b. axon
c. dendrite
d. cell body
Answer b % correct 81 a= 2 b= 81 c= 18 d= 0 *r* = .20
39. The purpose of the myelin sheath is to _____.
a. provide a place for respiration and metabolism to occur
b. carry messages from the spinal cord to the brain
c. insulate the neuron so it can act more efficiently
d. receive messages from outside the neuron and carry them to the cell nucleus
Answer c % correct 87 a= 0 b= 3 c= 87 d= 10 *r* = .37

40. The tiny space between the axon terminal and the dendrites of another neuron is called the _____.
a. synaptic vesicle
b. synaptic knob
c. synaptic cleft or gap
d. synapse
Answer c % correct 84 a= 8 b= 1 c= 84 d= 6 *r* = .31

41. The entire area composed of the axon terminal of one neuron, the synaptic cleft, and the dendrite, or cell body of the next neuron is called the _____.
a. synaptic vesicle
b. synaptic knob
c. synaptic space
d. synapse
Answer d % correct 80 a= 11 b= 2 c= 6 d= 80 *r* = .22

42. Most axon terminals contain a number of tiny oval sacs called _____.
a. synaptic vesicles
b. synaptic knobs
c. neurotransmitters
d. receptor sites
Answer a % correct 41 a= 41 b= 6 c= 35 d= 15 *r* = .21

43. When a neural impulse reaches the end of an axon, it causes the tiny oval sacs at the end of the axon to release chemicals called _____.
a. effectors
b. neurotransmitters

c. stimulants
d. ions
Answer b % correct 95 a= 3 b= 95 c= 0 d= 2 *r* = .27

44. Which of the following is NOT true of all neurotransmitters?
a. They are chemicals.
b. They are stored in synaptic vesicles.
c. They are released across the synaptic space.
d. They increase the likelihood that the next neuron will fire.
Answer d % correct 70 a= 11 b= 12 c= 7 d= 70 *r* = .31

45. The myelin sheath _____.
a. is a fatty substance protecting the dendrites
b. helps to speed up neural messages within the cell
c. is found in all neurons
d. protects the cell's vesicles
Answer b % correct 60 a= 25 b= 60 c= 6 d= 8 *r* = .40

46. An emergency room physician must quickly treat a patient who has been bitten by a black widow spider. The physician knows she must:
a. prevent the buildup of acetylcholine in the patient's nervous system.
b. prevent the buildup of catecholamines in the patient's nervous system.
c. prevent the breakdown of catecholamines in the patient's nervous system.
d. prevent the reabsorption of acetylcholine in the patient's nervous system.
Answer a % correct 73 a= 73 b= 2 c= 7 d= 18 *r* = .33

47. An emergency room physician must treat a patient who has recently eaten a can of tainted mushrooms. Suspecting botulism, the physician must treat the woman in order to:
a. prevent the breakdown of catecholamines in the patient's nervous system.
b. prevent the botulism toxin from blocking the release of acetylcholine.
c. prevent the toxin from breaking down the acetylcholine in the patient's nervous system.
d. prevent the botulism from blocking the release of catecholamines.
Answer b % correct 78 a= 3 b= 78 c= 8 d= 11 *r* = .23

48. Axons _____.
a. receive/detect neural impulses
b. carry messages away from a cell body
c. secrete chemicals to lubricate the cell body
d. are found in the cell body
Answer b % correct 80 a= 15 b= 80 c= 1 d= 3 *r* = .30

49. Nodes of Ranvier are:
a. specialized synapses.
b. gaps in the myelin sheath.
c. functional divisions of the brain produced by the central, lateral, and longitudinal fissures.
d. none of the above
Answer b % correct 50 a= 5 b= 50 c= 12 d= 34 *r* = .29

The Peripheral Nervous System

50. The branch of the autonomic nervous system that prepares the body for quick action in an emergency is the _____ division.
a. central

b. secondary
c. sympathetic
d. parasympathetic
Answer c % correct 73 a= 1 b= 7 c=73 d= 19 *r* = .34

51. The nervous system is comprised of two major parts: _____.
a. the central nervous system and the peripheral nervous system
b. the afferent nervous system and the efferent nervous system
c. the sympathetic nervous system and the parasympathetic nervous system
d. the brain and the spinal cord
Answer a % correct 69 a= 69 b= 2 c= 11 d= 17 *r* = .38

52. The system that relays messages in the form of electrochemical impulses throughout the body is called _____.
a. the arousal system
b. the nervous system
c. the limbic system
d. the endocrine system
Answer b % correct 92 a= 0 b= 92 c= 5 d= 2 *r* = .20

53. The autonomic nervous system has two divisions: _____.
a. central and peripheral
b. receptors and effectors
c. sympathetic and parasympathetic
d. limbic and endocrine
Answer c % correct 79 a= 9 b= 5 c= 79 d= 7 *r* = .36

54. All nerve cells and fibers that are **NOT** in the brain or spinal cord make up the _____ nervous system.
a. central
b. peripheral
c. autonomic
d. sympathetic
Answer b % correct 76 a= 9 b= 76 c= 10 d= 6 *r* = .48

55. Neurons whose primary purpose is to carry messages from the spinal cord or the brain to the muscles and glands are called _____.
a. afferent neurons
b. active neurons
c. efferent neurons
d. interneurons
Answer c % correct 40 a= 27 b= 11 c= 40 d= 22 *r* = .21

56. Neurons whose primary purpose is to collect information from the sensory organs and carry that information to the spinal cord or brain are called _____.
a. afferent neurons
b. active neurons
c. efferent neurons
d. interneurons
Answer a % correct 43 a= 43 b= 14 c= 22 d= 19 *r* = .21

57. The process of digesting your last snack or meal or the unconscious regulation of your breathing are all primarily rooted in the _____ nervous system.
a. autonomic
b. limbic
c. somatic

d. secondary
Answer a % correct 66 a= 66 b= 12 c= 18 d= 4 *r* = .44

58. The branch of the autonomic nervous system that prepares the body for quick action in an emergency is the _____ division.
a. central
b. secondary
c. parasympathetic
d. sympathetic
Answer d % correct 76 a= 1 b= 3 c= 19 d=76 *r* = .38

59. A young woman 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 brain informing her of the pain from the burn?
a. sensory neurons
b. motor neurons
c. synaptic neurons
d. association neurons
Answer a % correct 88 a= 88 b= 2 c= 7 d= 3 *r* = .24

60. The division of the nervous system that connects the brain and spinal cord to the rest of the body is the _____ system.
a. peripheral nervous
b. endocrine
c. central nervous
d. secondary nervous
Answer a % correct 42 a= 42 b= 12 c= 12 d= 4 *r* = .45

61. The idea that large fibers in the sensory nerves can prevent impulses from reaching the brain and thus prevent the sensation of pain is part of the _____ theory of pain.
a. gate-control
b. primary process
c. free nerve ending
d. volley
Answer a % correct 93 a= 93 b= 3 c= 4 d= 0 *r* = .43

62. The deer waits motionlessly, hidden in the thicket as the band of hunters approach. As they get closer, their dogs bark, picking up the scent of their prey. In a futile effort to escape, the deer bolts. Which of the following most accurately describes the nervous system of the hunted deer at this point?
a. Its sympathetic nerve fibers are more active than its parasympathetic nerve fibers.
b. Its parasympathetic nerve fibers are more active than its sympathetic nerve fibers.
c. Both its sympathetic and parasympathetic nerve fibers are equally active.
d. Neither its sympathetic nor its parasympathetic nerve fibers are aroused.
Answer a % correct 77 a= 77 b= 13 c= 10 d= 0 *r* = .37

63. It's midnight, and you are alone in your room studying. You hear a loud crash outside your room, and your whole body reacts instantly and furiously. The system that produces these reactions is the _____ system.
a. central nervous
b. sympathetic nervous
c. parasympathetic nervous
d. limbic
Answer b % correct 80 a= 6 b= 80 c= 12 d= 3 *r* = .52

64. The FIRST division of the nervous system consists of the:
a. central and peripheral nervous systems.
b. brain and spinal cord.

c. somatic and autonomic nervous systems.
d. sympathetic and parasympathetic nervous systems.
Answer a % correct 73 a= 73 b= 20 c= 4 d= 26 *r* = .41

65. The autonomic and somatic nervous systems are divisions of the _____ system.
a. central
b. parasympathetic
c. peripheral
d. sympathetic
Answer c % correct 63 a= 22 b= 5 c= 63 d= 10 *r* = .28

66. The autonomic nervous system is responsible for:
a. controlling the skeletal muscles.
b. sending sensory input to the brain.
c. making choices and decisions.
d. the activity of internal organs and glands.
Answer d % correct 70 a= 9 b= 11 c= 9 d= 70 *r* = .35

67. The part of the nervous system that allows the brain to regulate digestion, heart rate, and respiration without our conscious attention is the:
a. autonomic nervous system.
b. central nervous system.
c. somatic nervous system.
d. spinal cord.
Answer a % correct 77 a= 77 b= 20 c= 3 d= 0 *r* = .27

68. The nervous system called the "fight or flight" system is the _____ system.
a. central
b. parasympathetic
c. somatic
d. sympathetic
Answer d % correct 74 a= 5 b= 10 c= 10 d= 74 *r* = .45

69. Calm is to aroused as _____ is to _____.
a. parasympathetic; sympathetic
b. autonomic; motor
c. sympathetic; parasympathetic
d. central; peripheral
Answer a % correct 77 a= 77 b= 3 c= 21 d= 0 *r* = .31

70. One evening Betty was walking to the dorm from the gym when she was stopped by two men who demanded her money. Since she was a good athlete, Betty decided to make a run for it. Pretending to open her purse, she suddenly turned and dashed off. Although pursued, Betty outran her assailants. During this incident, which part of Betty's nervous system was most directly responsible for her successful escape?
a. midbrain
b. parasympathetic nervous system
c. forebrain
d. sympathetic nervous system
Answer d % correct 78 a= 2 b= 14 c= 6 d= 78 *r* = .45

71. The autonomic nervous system is divided into two parts. These are termed the _____ nervous systems.
a. ascending and descending
b. frontal and temporal
c. left and right
d. parasympathetic and sympathetic
Answer d % correct 96 a= 2 b= 2 c= 0 d= 96 *r* = .43

72. The parasympathetic and sympathetic divisions make up the:
a. motor cortex.
b. endocrine system.
c. autonomic nervous system.
d. neocortex.
Answer c % correct 97 a= 2 b= 0 c= 97 d= 1 *r* = .31

73. The nervous system is comprised of two parts: _____.
a. the central nervous system and the peripheral nervous system
b. the afferent nervous system and the efferent nervous system
c. the sympathetic nervous system and the parasympathetic nervous system
d. the brain and the spinal cord
Answer b % correct 96 a= 1 b= 96 c= 0 d= 3 *r* = .34

74. 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
Answer b % correct 94 a= 4 b= 94 c= 1 d= 1 *r* = .25

75. The two major divisions of the central nervous system are:
a. left and right hemispheres.
b. the brain and autonomic systems.
c. brain and spinal cord.
d. peripheral and autonomic systems.
Answer c % correct 90 a= 3 b= 1 c= 90 d= 6 *r* = .26

76. When the sympathetic nervous system assumes control of the involuntary bodily processes during a stressful situation, which of the following changes is likely to occur?
a. digestion stops
b. less blood is pumped to muscles
c. air passages become smaller
d. sweat glands are less active
Answer a % correct 68 a= 68 b= 12 c= 16 d= 3 *r* = .45

77. Calm is to aroused as _____ is to _____.
a. parasympathetic; sympathetic
b. autonomic; motor
c. sympathetic; parasympathetic
d. central; peripheral
Answer a % correct 66 a= 66 b= 7 c= 23 d= 4 *r* = .54

78. Which of the following most directly controls bodily reflexes?
a. peripheral nervous system
b. brainstem
c. spinal cord
d. hindbrain
Answer c % correct 55 a= 30 b= 4 c= 55 d= 11 *r* = .37

The Central Nervous System

79. Which hemisphere of the cerebral cortex is usually dominant in spatial tasks?
a. the front hemisphere
b. the rear hemisphere
c. the left hemisphere
d. the right hemisphere
Answer d % correct 46 a= 13 b= 14 c= 27 d= 46 *r* = .46

80. The area in the back of the temporal lobe that is important in our ability to listen and in processing and understanding what others are saying is _____.
a. Korsakoff's area
b. Wernicke's area
c. Broca's area
d. Sach's area
Answer b % correct 60 a= 4 b= 60 c= 34 d= 1 *r* = .35

81. The structure in the hindbrain that controls certain reflexes and coordinates the body's movements is the _____.
a. medulla
b. cerebellum
c. pons
d. reticular formation
Answer b % correct 70 a= 13 b= 70 c= 5 d= 12 *r* = .29

82. The part of the brain that receives sensations of touch, balance, bodily position, and oversees spatial abilities is the _____.
a. occipital lobe
b. temporal lobe
c. parietal lobe
d. frontal lobe
Answer c % correct 61 a= 10 b= 15 c= 61 d= 13 *r* = .33

83. The outer surface of the two cerebral hemispheres that regulate most complex behavior is called the _____.
a. cerebellum
b. corpus callosum
c. cerebral cortex
d. substantia nigra
Answer c % correct 74 a= 7 b= 12 c= 74 d= 7 *r* = .44

84. The part of the brain that helps process hearing and give meaning to words is the _____.
a. the occipital lobe
b. the temporal lobe
c. the parietal lobe
d. the frontal lobe
Answer b % correct 72 a= 9 b= 72 c= 12 d= 6 *r* = .37

85. The cerebellum _____.
a. controls blood pressure
b. is involved in emotional behavior
c. coordinates actions so that movements are efficient
d. relays messages from the sensory receptors
Answer c % correct 74 a= 4 b= 12 c= 74 d= 11 *r* = .44

86. Which hemisphere of the cerebral cortex is usually dominant in language tasks?
a. the front hemisphere
b. the rear hemisphere
c. the left hemisphere
d. the right hemisphere
Answer c % correct 70 a= 8 b= 4 c= 70 d= 18 *r* = .38

87. The part of the brain which interprets visual information is the _____.
a. occipital lobe
b. temporal lobe
c. parietal lobe
d. frontal lobe
Answer a % correct 89 a= 89 b= 6 c= 3 d= 2 *r* = .26

88. A young woman recovering from a blow to her head finds she has great difficulty maintaining her balance and coordinating her movements. Injury to which part of her brain is likely to be causing her difficulties?
a. cerebellum
b. medulla
c. cerebral cortex
d. thalamus
Answer a % correct 47 a= 47 b= 18 c= 18 d= 17 *r* = .22

89. The part of the brain most people think of when they talk about the brain is the _____.
a. cerebral cortex
b. pons
c. medulla
d. cerebellum
Answer a % correct 50 a= 50 b= 3 c= 13 d= 34 *r* = .33

90. The notion that human language production is controlled primarily by the left cerebral cortex was first proposed by _____.
a. Paul Broca
b. Sally Shaywitz
c. Karl Wernicke
d. Hermann Ebbinghaus
Answer a % correct 53 a= 53 b= 3 c=35 d= 7 *r* = .31

91. The part of the hind brain that largely controls breathing, heart rate, and blood pressure is the _____.
a. cerebral cortex
b. pons
c. medulla
d. cerebellum
Answer c % correct 86 a= 3 b= 2 c= 86 d= 9 *r* = .29

92. Garfield is having great difficulty controlling his appetite. All he wants to do is eat and no matter how much he eats he is still hungry. His weight is approaching 400 pounds and he still constantly wants to eat. His physician says the problem is due to a disorder in a specific center of the brain. The brain center is most likely the _____.
a. medulla
b. cerebral cortex
c. thalamus
d. hypothalamus
Answer d % correct 51 a= 0 b= 10 c= 39 d= 51 *r* = .28

93. The site of many mental processes that are unique to humans (self-awareness, initiative, planning ability, and goal-directed behavior) is the _____.
a. occipital lobes
b. temporal lobes
c. parietal lobes
d. frontal lobes
Answer d % correct 68 a= 7 b= 12 c= 13 d= 68 *r* = .57

94. "Split Brain" patients are patients who have had _____.
a. a prefrontal lobotomy
b. their cerebellum split in the middle
c. their corpus callosum cut
d. a fracture skull in which bone fragments penetrated into the brain
Answer c % correct 78 a= 7 b= 16 c= 78 d= 0 *r* = .36

95. Despite its dangers, a young man continues to take cocaine because of the feeling of euphoria it produces for him. This powerful arousal of his nervous system is probably due to cocaine's ability to:
a. inhibit enzymes that break down neurotransmitters.
b. increase the release of neurotransmitters.
c. block the receptor sites for neurotransmitters.
d. prevent neurotransmitters from being reabsorbed into the synaptic vesicles.
Answer d % correct 40 a= 2 b= 22 c= 35 d= 40 *r* = .43

96. The forebrain is one of _____ operationally distinct sections of the brain.
a. two
b. three
c. four
d. five
Answer b % correct 57 a= 4 b= 57 c= 35 d= 4 *r* = .39

97. Eating, drinking, sexual behavior, temperature control, and sleeping are most strongly influenced by the:
a. medulla.
b. cerebral cortex.
c. thalamus.
d. hypothalamus.
Answer d % correct 55 a= 10 b= 19 c= 15 d= 55 *r* = .40

98. The part of the brain which controls hearing, does some additional processing of visual information, and is probably the site of permanent memory storage is:
a. the occipital lobe.
b. the temporal lobe.
c. the parietal lobe.
d. the frontal lobe.
Answer b % correct 74 a= 8 b= 74 c= 14 d= 3 *r* = .45

99. The structure that connects the two hemispheres of the cerebral cortex is the _____.
a. corpus callosum
b. pineal gland
c. pons
d. reticular formation
Answer a % correct 84 a= 84 b= 0 c= 8 d= 8 *r* = .40

100. A "split brain" patient is asked to stare at a spot on a screen. When a picture of an object is shown to the left of the spot, the patient can _____.
a. identify the object verbally and pick it out of a group of hidden objects using her right hand

b. identify the object verbally and pick it out of a group of hidden objects using her left hand
c. pick the object out of a group of hidden objects using her left hand, but cannot identify it verbally
d. pick the object out of a group of hidden objects using her right hand, but cannot identify it verbally
Answer c % correct 46 a= 17 b= 8 c= 46 d= 29 *r* = .21

101. The limbic system is most closely connected to the _____.
a. hypothalamus
b. endocrine system
c. frontal lobes
d. thalamus
Answer a % correct 24 a= 24 b= 38 c= 29 d= 9 *r* = .42

102. The medulla, pons, and thalamus are all part of the:
a. limbic system.
b. corpus callosum.
c. cerebral cortex.
d. brainstem.
Answer d % correct 72 a= 9 b= 3 c= 15 d= 72 *r* = .38

103. The brain's "relay station" is the _____.
a. hypothalamus
b. medulla
c. pons
d. thalamus
Answer d % correct 72 a= 10 b= 13 c= 4 d= 72 *r* = .51

104. Which of the following is NOT a function of the hypothalamus?
a. regulating eating
b. regulating sleeping
c. relaying sensory inputs to the higher centers in the brain
d. regulating the "restorative" functioning of the autonomic nervous system after an emergency has passed
Answer c % correct 39 a= 6 b= 19 c= 39 d= 36 *r* = .27

105. Which of the following is NOT a function of the hypothalamus?
a. maintaining homeostasis
b. regulating the output of the pituitary
c. controlling the emergency response of the autonomic nervous system
d. coordinating smooth muscle movement
Answer d % correct 45 a= 27 b= 7 c= 21 d= 45 *r* = .24

106. A neuroanatomist destroyed a dog's reticular formation to determine its function. Of the following, which is the most likely result? The dog:
a. could no longer hear.
b. could no longer see.
c. lapsed into a complete and irreversible coma.
d. became hyper alert and no longer slept normally.
Answer c % correct 36 a= 4 b= 21 c= 36 d= 39 *r* = .20

107. If the limbic system were destroyed, which of the following structures would be damaged?
a. cerebellum and corpus callosum
b. cerebellum and amygdala
c. amygdala and hippocampus
d. hippocampus and corpus callosum
Answer c % correct 69 a= 18 b= 8 c= 69 d= 3 *r* = .39

108. The part of our brain that MOST makes us human is the:
a. cerebellum.
b. cerebral cortex.
c. medulla.
d. pons.
Answer b % correct 65 a= 20 b= 65 c= 11 d= 4 *r* = .46

109. Which of the following is NOT a lobe of the brain?
a. corpus callosum
b. frontal
c. occipital
d. parietal
Answer a % correct 99 a= 99 b= 0 c= 0 d= 1 *r* = .15

110. The somatosensory cortex is located in the _____ lobe of the brain.
a. frontal
b. occipital
c. parietal
d. temporal
Answer c % correct 47 a= 32 b= 10 c= 47 d= 11 *r* = .37

111. The motor cortex is located in the _____ lobe of the brain.
a. frontal
b. occipital
c. parietal
d. temporal
Answer a % correct 74 a= 74 b= 6 c= 21 d= 9 *r* = .38

112. A victim of a car wreck with head injuries, whose involuntary bodily processes (breathing, heartbeat, etc.) have been disturbed, probably has had damage done to the _____.
a. hindbrain
b. pons
c. medulla
d. forebrain
Answer c % correct 78 a= 10 b= 6 c= 78 d= 6 *r* = .36

113. Damage to the medulla can seriously impair one's ability to:
a. sing.
b. write.
c. breathe.
d. metabolize food.
Answer c % correct 78 a= 3 b= 11 c= 78 d= 7 *r* = .35

114. Which part of the brain can be thought of as a major switching station that directs incoming information to the correct brain structure?
a. midbrain
b. thalamus
c. cerebellum
d. reticular activating system
Answer b % correct 50 a= 15 b= 50 c= 13 d= 21 *r* = .32

115. The motor impulses/commands associated with the muscular coordination and movements necessary for one to write originate in which lobe of the cerebral cortex?
a. temporal

b. parietal
c. occipital
d. frontal
Answer d % correct 55 a= 10 b= 33 c= 2 d= 55 *r* = .30

116. A brain tumor's growth has caused Dick's vision to suffer. Which lobe of the brain is being affected by the tumor's growth?
a. frontal
b. occipital
c. parietal
d. temporal
Answer b % correct 91 a= 2 b= 91 c= 4 d= 3 *r* = .23

117. The bundle of nerves that connects the two hemispheres of the brain is called the:
a. basal ganglia.
b. longitudinal fissure.
c. corpus callosum
d. somatosensory cortex
Answer c % correct 84 a= 7 b= 10 c= 84 d= 0 *r* = .40

118. After removal of a tumor from the LEFT side of her brain, Sharon recovered well. However, some of her former abilities are now limited. Which of the following abilities are most likely affected?
a. coordinated walking movements
b. solving algebra equations
c. assembling puzzles
d. recognizing objects that she sees
Answer b % correct 68 a= 14 b= 68 c= 10 d= 8 *r* = .28

119. The two major divisions of the central nervous system are:
a. left and right hemispheres.
b. the brain and autonomic systems.
c. brain and spinal cord.
d. peripheral and autonomic systems.
Answer c % correct 70 a= 2 b= 2 c= 70 d= 26 *r* = .20

120. The brain is part of the:
a. nervous system.
b. endocrine system.
c. thalamic system.
d. cranial system.
Answer a % correct 92 a= 92 b= 3 c= 2 d= 3 *r* = .44

121. The brain:
a. is an integrated system within itself.
b. controls the endocrine system.
c. is part of the nervous system.
d. All of the above.
Answer d % correct 95 a= 1 b= 1 c= 4 d= 95 *r* = .20

122. The human brain
a. weighs about 6 to 7 ounces.
b. is composed of several thousand neurons.
c. is half nerve tissue and half motor tissue.
d. none of the above.
Answer d % correct 62 a= 13 b= 16 c= 9 d= 62 *r* = .20

123. Which of the following statements about the brain is FALSE?
a. It weighs about 3 pounds.
b. It contains billions of neurons.
c. It is composed of nerve tissues.
d. It can be subdivided on the basis of structure, but not function.
Answer d % correct 88 a= 5 b= 1 c= 6 d= 88 *r* = .21

124. The part of the brain which controls breathing, heartbeat, and posture is the
a. pituitary gland.
b. neocortex.
c. hypothalamus.
d. medulla.
Answer d % correct 82 a= 0 b= 0 c= 18 d= 82 *r* = .41

125. If you are shot in the head and there is damage to the medulla this can seriously impair your ability to
a. sing.
b. write.
c. breathe.
d. urinate.
Answer c % correct 87 a= 2 b= 8 c= 87 d= 3 *r* = .31

126. The medulla, pons, and cerebellum are all part of the:
a. midbrain.
b. hindbrain.
c. spinal cord.
d. forebrain.
Answer b % correct 89 a= 4 b= 89 c= 5 d= 2 *r* = .47

127. The hypothalamus does NOT control:
a. bowel movements.
b. sweating.
c. reactions to pain.
d. fine motor coordination.
Answer d % correct 59 a= 21 b= 7 c= 14 d= 59 *r* = .22

128. The corpus callosum:
a. is an integral area of the hindbrain.
b. is responsible for taste and smell sensations.
c. connects the left and right cerebral hemispheres.
d. supports the reticular activating system.
Answer c % correct 90 a= 3 b= 3 c= 90 d= 4 *r* = .39

129. The left and right cerebral hemispheres are connected by the:
a. occipital lobe.
b. pons.
c. sylvian fissure.
d. corpus callosum.
Answer d % correct 95 a= 1 b= 2 c= 3 d= 95 *r* = .38

130. The left cerebral hemisphere primarily controls:
a. the right side of the body.
b. the left side of the body.
c. all motor functions.
d. spatial reasoning.
Answer a % correct 91 a= 91 b= 2 c= 4 d= 3 *r* = .35

131. The right cerebral hemisphere primarily controls:
a. the right side of the body.
b. the left side of the body.
c. speech and language.
d. a and c.
Answer b % correct 93 a= 2 b= 93 c= 3 d= 2 *r* = .28

132. Individuals who have had their corpus callosum cut are said to have a:
a. split brain
b. disintegrating personality
c. cranial refraction
d. migraine headache
Answer a % correct 96 a= 96 b= 2 c= 2 d= 0 *r* = .35

133. An individual with a "split brain":
a. will most likely die.
b. will probably become schizophrenic.
c. will probably develop a split personality.
d. none of the above
Answer d % correct 84 a= 3 b= 3 c= 10 d= 84 *r* = .21

134. The brain is connected to the rest of the body via the:
a. corpus callosum.
b. spinal cord.
c. limbic system.
d. cranial nerve.
Answer b % correct 96 a= 0 b= 96 c= 2 d= 2 *r* = .21

135. The spinal cord:
a. connects the brain to the rest of the body.
b. is composed of nerve tissue.
c. can work independently of the brain.
d. all of the above
Answer d % correct 80 a= 15 b= 4 c= 1 d= 80 *r* = .28

136. Which of the following is NOT one of the three distinct parts of the brain?
a. hindbrain
b. lateralbrain
c. midbrain
d. forebrain
Answer b % correct 99 a= 1 b= 99 c= 0 d= 0 *r* = .06

137. The part of the hindbrain that controls such things as breathing, heart rate, and blood pressure is the _____.
a. cerebral cortex
b. pons
c. medulla
d. cerebellum
Answer c % correct 60 a= 3 b= 17 c= 60 d= 20 *r* = .22

138. A young woman recovering from a blow to her head finds she has great difficulty maintaining her balance and coordinating her movements. Injury to which part of her brain is likely to be causing her difficulties?
a. cerebellum
b. medulla
c. cerebral cortex

d. thalamus
Answer a % correct 72 a= 72 b= 8 c= 18 d= 2 *r* = .37

139. The cerebellum _____.
a. controls blood pressure
b. is involved in emotional behavior
c. coordinates actions so that movements are efficient
d. relays messages from the sensory receptors
Answer c % correct 84 a= 3 b= 5 c= 84 d= 8 *r* = .40

140. The structure in the center of the forebrain that relays sensory information is called the _____.
a. medulla
b. hypothalamus
c. pons
d. thalamus
Answer d % correct 63 a= 10 b= 12 c= 15 d= 63 *r* = .41

141. Eating, drinking, sexual behavior, temperature control, and sleeping are strongly influenced by the _____.
a. medulla
b. cerebral cortex
c. thalamus
d. hypothalamus
Answer d % correct 71 a= 3 b= 5 c= 21 d= 71 *r* = .29

142. The part of the brain responsible for emotional behavior and regulating the nervous system in times of stress is the _____.
a. medulla
b. cerebellum
c. thalamus
d. hypothalamus
Answer d % correct 60 a= 8 b= 4 c= 28 d= 60 *r* = .35

143. Garcia is having great difficulty controlling his appetite. All he wants to do is eat and no matter how much he eats, he is still hungry. His weight is approaching 400 pounds and he still constantly wants to eat. His physician says the problem is due to a disorder in a specific center of the brain. That brain center is most likely the _____.
a. medulla
b. cerebral cortex
c. thalamus
d. hypothalamus
Answer d % correct 60 a= 15 b= 8 c= 17 d= 60 *r* = .44

144. Darlene has just discovered that she made the dean's list, and she's in ecstasy--singing and dancing down the corridor. Which area of the brain is directing her behavior?
a. hypothalamus
b. thalamus
c. cerebellum
d. midbrain
Answer a % correct 21 a= 21 b= 16 c= 36 d= 28 *r* = .20

145. The part of the brain which controls hearing, does some additional processing of visual information, and is probably the site of permanent memory storage is _____.
a. the occipital lobe
b. the temporal lobe

c. the parietal lobe
d. the frontal lobe
Answer b % correct 64 a= 15 b= 64 c= 11 d= 10 *r* = .37

146. The part of the brain that receives sensations of touch, balance, and bodily position is the _____.
a. occipital lobe
b. temporal lobe
c. parietal lobe
d. frontal lobe
Answer c % correct 62 a= 9 b= 14 c= 62 d= 15 *r* = .51

147. Corey was in an automobile accident that resulted in an injury to her brain. She now has difficulty maintaining her balance and normal body positions. Her sense of touch has also been injured. The part of her brain most likely injured was her _____.
a. occipital lobe
b. temporal lobe
c. parietal lobe
d. frontal lobe
Answer c % correct 66 a= 4 b= 13 c= 66 d= 16 *r* = .34

148. Corey was in an automobile accident that resulted in an injury to her brain. She now has difficulty with her hearing and her memory. The part of her brain most likely injured was her _____.
a. occipital lobe
b. temporal lobe
c. parietal lobe
d. frontal lobe
Answer b % correct 68 a= 10 b= 68 c= 11 d= 10 *r* = .34

149. The structure that connects the two hemispheres of the cerebral cortex is the _____.
a. corpus callosum
b. pineal gland
c. pons
d. reticular formation
Answer a % correct 99 a= 99 b= 0 c= 1 d= 0 *r* = .02

150. Which hemisphere of the cerebral cortex is dominant in language tasks?
a. front
b. rear
c. left
d. right
Answer c % correct 66 a= 18 b= 3 c= 66 d= 13 *r* = .38

151. Which hemisphere of the cerebral cortex is dominant in spatial tasks and concept formation?
a. front
b. rear
c. left
d. right
Answer d % correct 62 a= 17 b= 6 c= 16 d= 62 *r* = .29

152. A "split brain" patient is a patient who has had _____.
a. a prefrontal lobotomy
b. their cerebellum split in the middle
c. their corpus callosum cut
d. a fractured skull in which bone fragments penetrated into the brain
Answer c % correct 90 a= 2 b= 8 c= 90 d= 0 *r* = .38

153. The hemisphere of the brain that acts as an interpreter, helping us with sequencing and logic is the _____.
a. front
b. rear
c. left
d. right
Answer d % correct 51 a= 12 b= 4 c= 51 d= 33 *r* = .24

154. A victim of a car wreck with head injuries, whose involuntary bodily processes (breathing, heartbeat, etc.) have been disturbed, probably has had damage done to the _____.
a. hindbrain
b. pons
c. medulla
d. forebrain
Answer c % correct 81 a= 9 b= 1 c= 81 d= 9 *r* = .34

155. A brain tumor's growth has caused Dick's vision to suffer. Which lobe of the brain is being affected by the tumor's growth?
a. frontal
b. occipital
c. parietal
d. temporal
Answer b % correct 92 a= 5 b= 92 c= 3 d= 1 *r* = .21

156. The bundle of nerves that connects the two hemispheres of the brain is called the _____.
a. basal ganglia
b. longitudinal fissure
c. corpus callosum
d. somatosensory cortex
Answer c % correct 88 a= 6 b= 3 c= 88 d= 3 *r* = .38

157. Which part of the brain can be thought of as a major switching station that directs incoming information to the correct brain structure?
a. midbrain
b. thalamus
c. cerebellum
d. reticular activating system
Answer b % correct 54 a= 6 b= 54 c= 17 d= 23 *r* = .28

158. The brain is connected to the other parts of the nervous system by the _____.
a. spinal cord
b. corpus callosum
c. brainstem
d. peripheral nervous system
Answer a % correct 58 a= 58 b= 2 c= 37 d= 3 *r* = .33

159. The _____ looks like two wrinkled hemispheres.
a. cerebellum
b. cerebrum
c. forebrain
d. all of the above
Answer b % correct 35 a= 29 b= 35 c= 5 d= 31 *r* = .27

The Chemical Connection

160. The glands that secrete hormones directly into the bloodstream are called _____.
a. lymph glands
b. exocrine glands
c. hippocampal glands
d. endocrine glands
Answer d % correct 77 a= 6 b= 10 c= 7 d= 77 *r* = .31

161. Endocrine glands are glands that secrete _____.
a. excitory neurotransmitters
b. inhibitory neurotransmitters
c. hormones
d. enzymes
Answer c % correct 73 a= 12 b= 5 c= 73 d= 10 *r* = .25

162. Chemical substances released by the endocrine glands to help regulate bodily functions are _____.
a. enzymes
b. neurotransmitters
c. antigens
d. hormones
Answer d % correct 63 a= 14 b= 18 c= 4 d= 63 *r* = .51

163. The glands that secrete hormones directly into the bloodstream are called _____.
a. lymph glands
b. exocrine glands
c. hippocampal glands
d. endocrine glands
Answer d % correct 93 a= 3 b= 4 c= 0 d= 93 *r* = .28

164. Jeff is 13 years old and he has recently noticed some remarkable changes in himself. Over the past few months his voice has started to change, growing deeper. He has begun to grow pubic hair, as well as the beginnings of a facial beard. He is also filling out, with his muscles developing rapidly. These changes in Jeff are probably due to the action of _____.
a. gonads
b. thyroid gland
c. pineal gland
d. adrenal gland
Answer a % correct 60 a= 60 b= 24 c= 10 d= 6 *r* = .32

165. The pea-sized gland that is stimulated by light and helps regulate activity levels over the course of a day is the:
a. adrenal
b. pituitary
c. pineal
d. thyroid
Answer c % correct 61 a= 13 b= 22 c= 61 d= 5 *r* = .43

166. Mendel postulated the existence of:
a. genes
b. chromosomes
c. hormones
d. DNA
Answer a % correct 43 a= 43 b= 13 c= 17 d= 26 *r* = .42

167. The pituitary gland is controlled by the:
a. brainstem.
b. hypothalamus.
c. reticular formation.
d. spinal cord.
Answer b % correct 73 a= 10 b= 73 c= 11 d= 5 *r* = .37

168. The thyroid and pituitary glands are parts of the _____ system.
a. gonad
b. endocrine
c. steroid
d. lymphatic
Answer b % correct 84 a= 1 b= 84 c= 0 d= 15 *r* = .35

169. Hank has been overweight since childhood. He diets frequently and can lose weight but always seems to gain it back, because he is unable to control his eating. Hank may have a problem with his:
a. catecholamine level.
b. thyroid gland.
c. pituitary gland.
d. limbic system.
Answer b % correct 87 a= 4 b= 87 c= 4 d= 3 *r* = .22

170. The endocrine system is made up of:
a. special centers which control our language functions.
b. neurons which transmit electrically charged messages.
c. glands which release hormones into the bloodstream.
d. none of the above
Answer c % correct 95 a= 0 b= 3 c= 95 d= 2 *r* = .21

171. The _____ system is made up of glands which release hormones into the bloodstream.
a. motor
b. endocrine
c. limbic
d. autonomic
Answer b % correct 81 a= 2 b= 81 c= 11 d= 6 *r* = .38

172. The thyroid and pituitary glands are part of our _____ system.
a. motor
b. glandular
c. limbic
d. endocrine
Answer d % correct 81 a= 0 b= 8 c= 11 d= 81 *r* = .35

173. Which of the following is NOT a part of the endocrine system?
a. thyroid
b. pons
c. pituitary
d. pancreas
Answer b % correct 88 a= 0 b= 88 c= 0 d= 12 *r* = .33

174. The limbic system is responsible for _____.
a. filtering incoming messages to the brain
b. connecting the brain to most of the rest of the body
c. fighting disease organisms that attempt to infect the brain

d. controlling learning and emotional behavior
Answer d % correct 60 a= 25 b= 11 c= 4 d= 60 *r* = .27

175. The _____ gland produces the hormone which regulates the body's rate of metabolism.
a. pituitary
b. adrenal
c. thyroid
d. parathyroid
Answer c % correct 55 a= 34 b= 10 c= 55 d= 1 *r* = .22

176. Estrogen is to _____ as testosterone is to _____.
a. gonads; testes
b. testes; ovaries
c. ovaries; testes
d. ovaries; gonads
Answer c % correct 89 a= 2 b= 1 c= 89 d= 8 *r* = .41

Revel Multiple Choice Assessment Questions

End of Module Questions

EOM_Q2.1.1

What is the name of the cell that sends and receives messages in the nervous system?

a. neuron
b. myelin
c. axon
d. dendrite

Topic: Neurons and Nerves: Building the Network
ANS: a, Remember the Facts, 1 – Easy, LO 2.1 - Identify the parts of a neuron and describe the function of each

EOM_Q2.1.2

Messages from other cells are received by the

a. dendrites.
b. soma.
c. axon.
d. nucleus.

Topic: Neurons and Nerves: Building the Network
ANS: a, Remember the Facts, 1 – Easy, LO 2.1 - Identify the parts of a neuron and describe the function of each

EOM_Q2.1.3

The charged particles inside and outside the cell are called

a. ions.
b. nuclei.
c. membranes.
d. axons.

Topic: Neurons and Nerves: Building the Network
ANS: a, Remember the Facts, 1 – Easy, LO 2.2 - Describe the action potential

EOM_Q2.1.4

What occurs to a neuron when it receives a chemical message?

a. The cell becomes positively charged on the inside.
b. The cell returns to its resting state.
c. The cell floods the nucleus with sodium ions.
d. The cell becomes impermeable for a short time.

Topic: Neurons and Nerves: Building the Network
ANS: a, Understand the Concepts, 2 – Moderate, LO 2.2 - Describe the action potential

EOM_Q2.1.5

After a neurotransmitter travels across the _____, it fits into a place on the dendrite of another neuron called the _____.

a. synapse; receptor site
b. synapse; synaptic vesicle
c. axon terminal; axon button
d. synaptic gap; GABA

Topic: Neurons and Nerves: Building the Network
ANS: a, Understand the Concepts, 2 – Moderate, LO 2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body

EOM_Q2.1.6

A molecule of neurotransmitter is to a _____ as a key is to a keyhole.

a. receptor site
b. axon
c. dendrite
d. synapse

Topic: Neurons and Nerves: Building the Network
ANS: a, Analyze It, 2 – Moderate, LO 2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body

EOM_Q2.2.1

The _____ part of the spinal cord transmits messages to and from the brain. The ____ part controls life-saving reflexes.

a. outer; inner
b. upper; lower
c. lower; upper
d. inner; outer

Topic: An Overview of the Nervous System
ANS: a, Remember the Facts, 2 – Moderate, LO 2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity

EOM_Q2.2.2

_____ carry messages from the senses to the spinal cord.

a. Afferent neurons
b. Efferent neurons
c. Interneurons
d. Motor neurons

Topic: An Overview of the Nervous System
ANS: a, Remember the Facts, 1 – Easy, LO 2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity

EOM_Q2.2.3

_____ can become other cells, such as blood cells, nerve cells, and brain cells, when those cells need to be replaced due to damage or wear and tear.

a. Stem cells
b. Neurotransmitters
c. Afferent neurons
d. Efferent neurons

Topic: An Overview of the Nervous System
ANS: a, Understand the Concepts, 2 – Moderate, LO 2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity

EOM_Q2.2.4

The peripheral nervous system is made up of

a. all the nerves and neurons that are not contained in the brain and spinal cord.
b. the brain and the spinal cord.
c. the cerebellum and the hippocampus.
d. the parietal lobes and the frontal lobes.

Topic: An Overview of the Nervous System
ANS: a, Remember the Facts, 1 – Easy, LO 2.5 - Describe the role of the somatic and autonomic nervous systems

EOM_Q2.2.5

The _____ is to involuntary muscles as the _____ is to voluntary muscles.

a. autonomic nervous system; somatic nervous system
b. somatic nervous system; autonomic nervous system
c. central nervous system; peripheral nervous system
d. peripheral nervous system; central nervous system

Topic: An Overview of the Nervous System
ANS: a, Analyze It, 3 – Difficult, LO 2.5 - Describe the role of the somatic and autonomic nervous systems

EOM_Q2.3.1

Endocrine glands differ from other glands in that they release _____ which flow directly into the bloodstream to affect target organs.

a. hormones
b. neurotransmitters
c. endorphins
d. axons

Topic: Distant Connections: The Endocrine Glands
ANS: a, Remember the Facts, 1 – Easy, LO 2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior

EOM_Q2.3.2

If the pancreas secretes too little insulin, it results in _____. If it secretes too much insulin, it results in _____.

a. diabetes; hypoglycemia
b. depression; anxiety
c. epilepsy; Parkinson's disease
d. diabetes; high blood pressure

Topic: Distant Connections: The Endocrine Glands
ANS: a, Understand the Concepts, 2 – Moderate, LO 2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior

EOM_Q2.3.3

In the _____ stage of the General Adaptation Syndrome, the body's resources are gone.

a. exhaustion
b. resolution
c. resistance
d. alarm

Topic: Distant Connections: The Endocrine Glands
ANS: a, Apply What You Know, 3 – Difficult, LO 2.7 - Describe how the autonomic nervous system and body are impacted by stress

EOM_Q2.3.4

In the _____ stage of the General Adaptation Syndrome, the body uses resources until the stress ends or the resources run out.

a. resistance
b. alarm
c. resolution
d. exhaustion

Topic: Distant Connections: The Endocrine Glands
ANS: a, Remember the Facts, 1 – Easy, LO 2.7 - Describe how the autonomic nervous system and body are impacted by stress

EOM_Q2.4.1

Deep brain stimulation is widely used to treat

a. Parkinson's disease.
b. Alzheimer's disease.
c. schizophrenia.
d. angina.

Topic: Looking Inside the Living Brain
ANS: a, Remember the Facts, 1 – Easy, LO 2.8 - Describe how lesioning studies and brain stimulation are used to study the brain

EOM_Q2.4.2

_____ is the insertion into the brain of an animal of a thin, insulated wire through which an electrical current is sent that destroys the brain cells at the tip of the wire.

a. Lesioning
b. EEG
c. Neuroplasticity
d. MRI

Topic: Looking Inside the Living Brain
ANS: a, Remember the Facts, 1 – Easy, LO 2.8 - Describe how lesioning studies and brain stimulation are used to study the brain

EOM_Q2.4.3

Mike had a metal plate inserted in his head after suffering a serious head injury. His doctor now wishes to examine his brain to see if any damage has occurred since his surgery. Which of the following procedures might the doctor prefer to use?

a. CT scan
b. MRI scan
c. EEG
d. PET scan

Topic: Looking Inside the Living Brain
ANS: a, Apply What You Know, 2 – Moderate, LO 2.9 - Describe how neuroimaging techniques can provide information about the brain's structure and function

EOM_Q2.4.4

_____ allows researchers to estimate the concentration of specific chemicals and neurotransmitters in the brain.

a. MRI spectroscopy
b. Diffusion tensor imaging
c. Computed tomography
d. Positron emission tomography

Topic: Looking Inside the Living Brain
ANS: a, Remember the Facts, 2 – Moderate, LO 2.9 - Describe how neuroimaging techniques can provide information about the brain's structure and function

EOM_Q2.5.1

The _____ stimulates the upper part of the brain, keeping people awake and alert.

a. reticular activating system
b. cerebellum
c. pons
d. limbic system

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Remember the Facts, 1 – Easy, LO 2.10 - Identify the different structures of the bottom

part of the brain, and describe the function of each

EOM_Q2.5.2

Which brain structure serves as a relay station for sensory information?
a. thalamus
b. limbic system
c. hypothalamus
d. amygdala

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Remember the Facts, 1 – Easy, LO 2.11 - Identify the structures of the brain that control emotion, learning, memory, and motivation

EOM_Q2.5.3

Humans with damage to the amygdala show decreased
a. fear response.
b. sex drive.
c. incidence of depression.
d. cancer risk.

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Remember the Facts, 1 – Easy, LO 2.11 - Identify the structures of the brain that control emotion, learning, memory, and motivation

EOM_Q2.5.4

The visual centers of the brain area are contained in the
a. occipital lobes.
b. corpus callosum.
c. parietal lobes.
d. temporal lobes.

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Remember the Facts, 2 – Moderate, LO 2.12 - Identify the parts of the cortex that control the different senses and the movement of the body

EOM_Q2.5.5

Cassie's mother suffered a stroke. Since then, she sometimes says strange things, such as, "I need to go to the store to buy some canaries," when she means to say that she needs groceries. Cassie's mother seems to be suffering from
a. Wernicke's aphasia.
b. nonspecific aphasia.
c. language degenerative disease.
d. Broca's aphasia.

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Apply What You Know, 3 – Difficult, LO 2.13 - Identify the parts of the cortex that are

responsible for higher forms of thought, such as language

EOM_Q2.5.6

Roger Sperry was looking for a cure for which disease when researching differentiation of the left and right hemispheres of the brain?

a. epilepsy
b. Parkinson's
c. spatial neglect
d. aphasia

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Remember the Facts, 1 – Easy, LO 2.14 - Explain how some brain functions differ between the left and right hemispheres

End of Chapter Questions

EOC_Q2.1

Which of the following examples would be most similar to a neuron?

a. a silicon chip in a computer that receives and transmits information between input and output devices as well as between other chips
b. a gun that fires when the trigger is pulled
c. tree branches that grow after receiving nourishment from the sun and rain
d. a nozzle at the end of a hose from which water is squirted

Topic: Neurons and Nerves: Building the Network
ANS: a, Apply What You Know, 3 – Difficult, LO 2.1 - Identify the parts of a neuron and describe the function of each

EOC_Q2.2

Which of the following parts of a neuron work most like a telephone wire that carries information away from a telephone?

a. axon
b. synapse
c. dendrites
d. soma

Topic: Neurons and Nerves: Building the Network
ANS: a, Understand the Concepts, 2 – Moderate, LO 2.1 - Identify the parts of a neuron and describe the function of each

EOC_Q2.3

While cutting wood for his daughter's playhouse, Lee accidentally severed his finger. Fortunately, Lee was quickly rushed to the hospital where his finger was successfully reattached, and Lee was eventually able to regain some function and feeling in it. Which of the following is/are responsible for helping to repair the nerve fibers in Lee's finger that give him the ability to regain function and feeling?

a. Schwann cells

b. glial cells
c. myelin
d. oligodendrocytes

Topic: Neurons and Nerves: Building the Network
ANS: a, Apply What You Know, 2 – Moderate, LO 2.1 - Identify the parts of a neuron and describe the function of each

EOC_Q2.4

Which of the following is TRUE about an agonist?
a. It mimics or enhances the effects of a neurotransmitter.
b. It can have an excitatory effect but not an inhibitory effect.
c. It can have an inhibitory effect but not an excitatory effect.
d. It blocks or reduces the effects of a neurotransmitter.

Topic: Neurons and Nerves: Building the Network
ANS: a, Understand the Concepts, 2 – Moderate, LO 2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body

EOC_Q2.5

Endorphins help the body
a. control pain.
b. stave off depression.
c. regulate growth.
d. regulate hormones.

Topic: Neurons and Nerves: Building the Network
ANS: a, Remember the Facts, 1 – Easy, LO 2.3 - Describe how neurons use neurotransmitters to communicate with each other and with the body

EOC_Q2.6

The spinal cord is divided into _____ main areas.
a. two
b. eight
c. ten
d. twelve

Topic: An Overview of the Nervous System
ANS: a, Remember the Facts, 1 – Easy, LO 2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity

EOC_Q2.7

Afferent neurons, efferent neurons, and interneurons make up the
a. reflex arc.
b. limbic system.
c. peripheral nervous system.

d. sympathetic division.

Topic: An Overview of the Nervous System
ANS: a, Remember the Facts, 1 – Easy, LO 2.4 - Explain how the brain and spinal cord interact, describe some misconceptions about the brain, and explain neuroplasticity

EOC_Q2.8

The nerves carrying messages from the central nervous system to the voluntary muscles comprise the
a. motor pathway.
b. sensory pathway.
c. autonomic nervous system.
d. parasympathetic division.

Topic: An Overview of the Nervous System
ANS: a, Remember the Facts, 1 – Easy, LO 2.5 - Describe the role of the somatic and autonomic nervous systems

EOC_Q2.9

Natalie sees a beautiful flower, so she walks over to touch and smell it. She is using the
a. somatic nervous system.
b. sympathetic division.
c. parasympathetic division.
d. autonomic nervous system.

Topic: LO 2.5 - Describe the role of the somatic and autonomic nervous systems
ANS: a, Apply What You Know, 2 – Moderate, An Overview of the Nervous System

EOC_Q2.10

Melatonin and thyroxin are examples of
a. hormones.
b. neurons.
c. glands.
d. stem cells.

Topic: Distant Connections: The Endocrine Glands
ANS: a, Remember the Facts, 1 – Easy, LO 2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior

EOC_Q2.11

Adrenal glands produce hormones called
a. corticoids.
b. thyroxin.
c. melatonin.
d. serotonin.

Topic: Distant Connections: The Endocrine Glands

ANS: a, Remember the Facts, 1 – Easy, LO 2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior

EOC_Q2.12

At the age of 21, Donte stands at 5 feet 2 inches in height. If it is believed that an endocrine gland is most likely responsible for Donte's lack of growth, which gland might his doctor be most interested in studying?

a. the pituitary gland
b. the pineal gland
c. the adrenal gland
d. the thyroid gland

Topic: Distant Connections: The Endocrine Glands
ANS: a, Apply What You Know, 2 – Moderate, LO 2.6 - Explain how the hormones released by glands interact with the nervous system and affect behavior

EOC_Q2.13

An auto accident rendered Chris's nervous system unable to send messages for him to swallow, so he is using a feeding tube. Which brain structure was most likely damaged in the accident?

a. the medulla
b. the pons
c. the reticular formation
d. the cerebellum

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Apply What You Know, 2 – Moderate, LO 2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each

EOC_Q2.14

When researchers destroy the reticular formation of rats via deep lesioning, the rats

a. enter a coma-like sleep from which they do not wake up.
b. lose all of their mobility and become incapable of walking.
c. begin eating and will not stop until their stomachs rupture and they die.
d. become blind.

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Understand the Concepts, 2 – Moderate, LO 2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each

EOC_Q2.15

Jared is 2 months old and cannot yet sit upright on his own. Jared's inability to sit on his own is most likely due to which of the following?

a. Jared's cerebellum has not yet fully developed.
b. Jared suffers from an enlarged medulla.
c. Jared has a lesion in his midbrain.
d. Jared's reticular formation failed to form properly during prenatal development.

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Apply What You Know, 3 – Difficult, LO 2.10 - Identify the different structures of the bottom part of the brain, and describe the function of each

EOC_Q2.16

Darius has been diagnosed with a tumor that affects the right side of his visual field. The tumor is most likely in which lobe of Darius's brain?

a. the left occipital lobe
b. the right frontal lobe
c. the left frontal lobe
d. the right occipital lobe

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Apply What You Know, 2 – Moderate, LO 2.12 - Identify the parts of the cortex that control the different senses and the movement of the body

EOC_Q2.17

In an attempt to ask for water, Josh, who recently experienced a stroke, said, "I…dot dink…otter." Josh seems to be suffering from _____.

a. Broca's aphasia
b. Wernicke's aphasia
c. Sperry's aphasia
d. Berger's aphasia

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Apply What You Know, 2 – Moderate, LO 2.13 - Identify the parts of the cortex that are responsible for higher forms of thought, such as language

EOC_Q2.18

The left hemisphere of the brain specializes in which of the following?

a. language
b. visual-spatial perception
c. emotional thought and recognition
d. pattern recognition

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Understand the Concepts, 1 – Easy, LO 2.14 - Explain how some brain functions differ between the left and right hemispheres

EOC_Q2.19

Phineas Gage lacked _____ because of the damage to his prefrontal cortex.

a. emotional control
b. bladder control
c. common sense
d. a conscience

Topic: From the Bottom Up: The Structures of the Brain
ANS: a, Apply What You Know, 2 – Moderate, LO 2.12 - Identify the parts of the cortex that control the different senses and the movement of the body

EOC_Q2.20

Much of the research over the past 10 years has focused on the _____ markers for ADHD, such as attention problems, that may or may not be combined with neuroimaging.

a. cognitive
b. environmental
c. biological
d. behavioral

Topic: Applying Psychology to Everyday Life: Paying Attention to Attention-Deficit/Hyperactivity Disorder
ANS: a, Remember the Facts, 2 – Moderate, LO 2.15 - Identify some potential causes of attention-deficit/hyperactivity disorder