Test Bank for Psychology 1st Edition by Hudson

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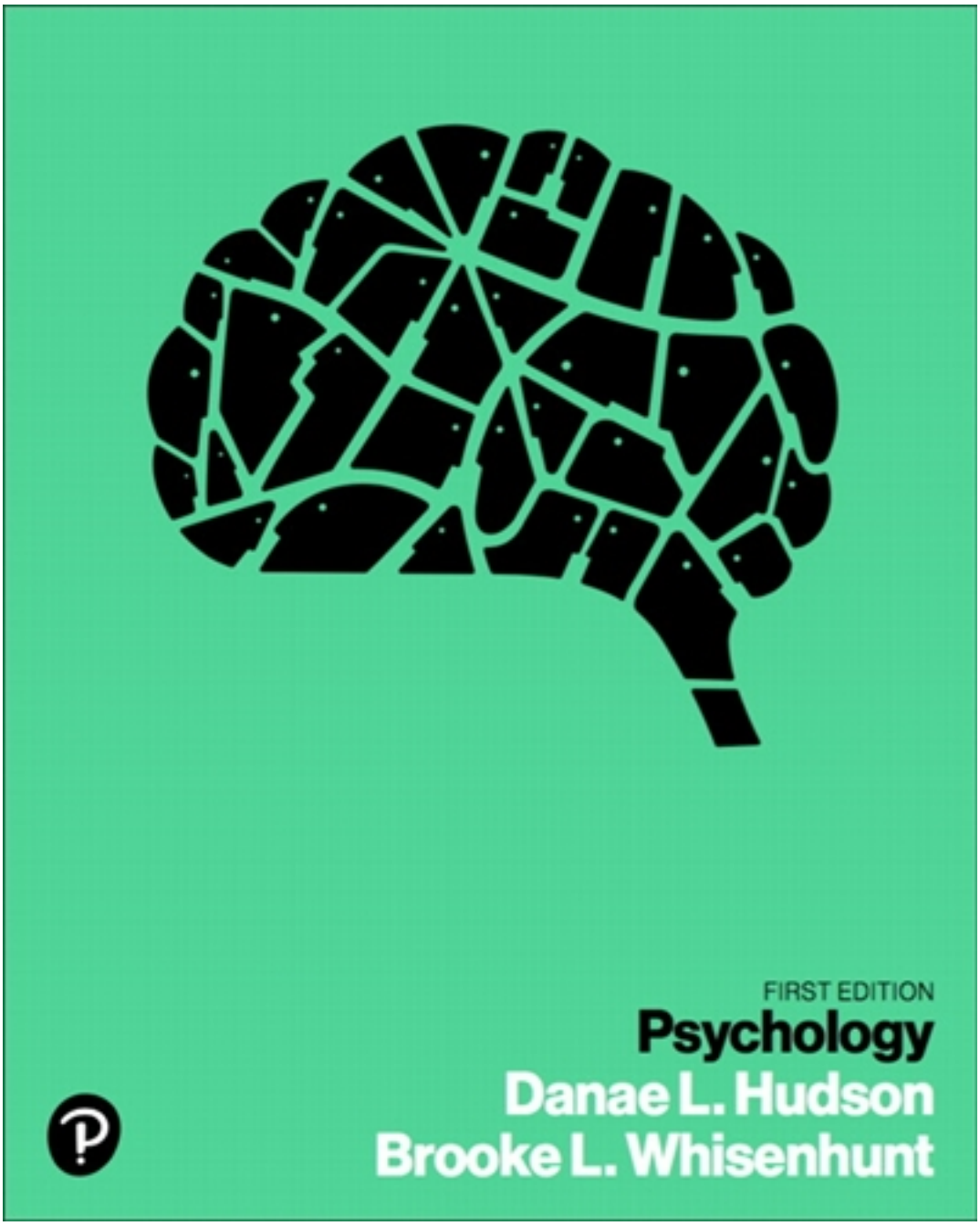


Test Bank

Chapter 2: Neuroscience and the Biology of Behavior

Topic		Factual	Conceptual	Applied	Analyze
Learning Objective 2.1 Identify the anatomy and function of a neuron.	Multiple Choice	2,7,8	3,11	1,4,6,10	5,9
	Fill-in-the-Blank				
	Short answer				
	Essay				
Learning Objective 2.2 Explain how neurons communicate with one another.	Multiple Choice	14,16,18,24	12,28,29	17,20,25,27, 30	13,15,19,21, 22,23,26
	Fill-in-the-Blank				
	Short answer		164	163	
	Essay		174		
Learning Objective 2.3 Recognize the effects of neurotransmitters on behavior.	Multiple Choice	31	35	32,33,34,37, 38,39,40	36
	Fill-in-the-Blank				
	Short answer		165		166
	Essay				
Learning Objective 2.4 Distinguish the concepts of synaptic plasticity and neurogenesis.	Multiple Choice	41,48,49	43,46,47		42,44,45
	Fill-in-the-Blank				
	Short answer				
	Essay				
Learning Objective 2.5 Identify each division of the nervous system.	Multiple Choice	50,51,57	52,53,54,55, 59,60,63,65	56,58,62,64, 67,68	61,66,69
	Fill-in-the-Blank				
	Short answer		167	168	
	Essay			175	178
Learning Objective 2.6 Recognize the purpose of the endocrine system and how some hormones affect	Multiple Choice	70,72,76, 84,85	73,75,78,82	74,77,79,81	71,80,83,86, 87
	Fill-in-the-Blank				
	Short answer				
	Essay		176		178

Topic		Factual	Conceptual	Applied	Analyze
health and behavior.					
Learning Objective 2.7 Differentiate structural and functional methods of studying the brain.	Multiple Choice	92,94	88,99,102	96,97,98, 101,104	89,90,91,93, 95,100,103
	Fill-in-the-Blank				
	Short answer				169
	Essay				
Learning Objective 2.8 Distinguish important anatomical areas of the brain and their functions.					
	Multiple Choice		108,109,114, 119,121	106,107,110, 115,116,120	105,111,112, 113,117,118
	Fill-in-the-Blank				
	Short answer		170,171		172
	Essay				178
Learning Objective 2.9 Analyze how damage to the brain affects behavior.	Multiple Choice		123,124	122	
	Fill-in-the-Blank				
	Short answer				
	Essay				178
Learning Objective 2.10 Recognize the functional impairments that occur in a split-brain patient.	Multiple Choice	125,127	128,130	126	129
	Fill-in-the-Blank				
	Short answer				
	Essay		177		
Learning Objective 2.11 Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.	Multiple Choice	133,134,137, 140,141,144	136,142,143	131,135	132,138,139
	Fill-in-the-Blank				
	Short answer				
	Essay				
Learning Objective 2.12 Describe how the field of behavioral genetics contributes to the	Multiple Choice	145,150,152, 155	146,151,153, 154	149	147,148
	Fill-in-the-Blank				
	Short answer		173		

Topic		Factual	Conceptual	Applied	Analyze
understanding of human behavior and disease.	Essay				178
Learning Objective 2.13 Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.	Multiple Choice	156,157,159, 161,162	158,160		
	Fill-in-the-Blank				
	Short answer				
	Essay				

Multiple Choice Questions

1. Dr. Kalini is a researcher who studies the areas of the brain important in the stages of sleep. Dr. Kalini is in the field of _____.
   A) cognitive psychology
   B) clinical neuropsychology
   C) biology
   D) biological psychology
   Answer: D
   Learning Objective: 2.1 Identify the anatomy and function of a neuron.
   Topic: The Structure and Function of a Neuron
   Difficulty Level: Moderate
   Skill Level: Apply What You Know
   Adaptive Pathway:
   APA LO: 1.2 Develop a working knowledge of the content domains in psychology.

2. A _____ is a tiny, excitable cell that receives stimulation and transmits information to other cells.
   A) soma
   B) neuron
   C) dendrite
   D) vesicle
   Answer: B
   Learning Objective: 2.1 Identify the anatomy and function of a neuron.
   Topic: The Structure and Function of a Neuron
   Difficulty Level: Easy
   Skill Level: Remember the Facts
   Adaptive Pathway:

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

3. _____ is to body as _____ is to branch.
   A) Soma; axon
   B) Dendrite; soma
   C) Axon; soma
   D) Soma; dendrite
   Answer: D
   Learning Objective: 2.1 Identify the anatomy and function of a neuron.
   Topic: The Structure and Function of a Neuron
   Difficulty Level: Moderate
   Skill Level: Understand the Concepts
   Adaptive Pathway:
   APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

4. The inbox on your e-mail program gathers messages from many places. In doing so, it is like the _____ of a neuron.
   A) dendrites
   B) axon
   C) soma
   D) terminal button
   Answer: A
   Learning Objective: 2.1 Identify the anatomy and function of a neuron.
   Topic: The Structure and Function of a Neuron
   Difficulty Level: Moderate
   Skill Level: Apply What You Know
   Adaptive Pathway:
   APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

5. Plastic coating on wires help insulate the wire. If the plastic coating acted like a myelin sheath, it would also _____.
   A) increase the speed with which the electricity travels down the wire
   B) block anything from getting inside the wire
   C) provide more power to the wire
   D) allow the wire to split off into two wires
   Answer: A
   Learning Objective: 2.1 Identify the anatomy and function of a neuron.
   Topic: The Structure and Function of a Neuron
   Difficulty Level: Difficult
   Skill Level: Analyze It
   Adaptive Pathway: 2.1.2
   APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

6. Keith visited his Grandpa who was diagnosed with Multiple Sclerosis last year. His Grandpa explained that the problems with his muscles and lack of coordination were

related to the protective covering wearing off from his neurons. In this scenario, the protective covering refers to the _____.
A) dendrites
B) terminal buttons
C) myelin sheath
D) soma
Answer: C
Learning Objective: 2.1 Identify the anatomy and function of a neuron.
Topic: The Structure and Function of a Neuron
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

7. The part of the cell responsible for carrying information down to the end of the neuron is called the _____.
A) myelin sheath
B) dendrite
C) axon
D) axon terminal
Answer: C
Learning Objective: 2.1 Identify the anatomy and function of a neuron.
Topic: The Structure and Function of a Neuron
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

8. The terminal button contains _____ that will be used to communicate to the next neuron.
A) electricity
B) chemicals
C) myelin
D) genetic information
Answer: B
Learning Objective: 2.1 Identify the anatomy and function of a neuron.
Topic: The Structure and Function of a Neuron
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway: 2.1.3
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

9. How is a neuron designed to ensure it gathers as much information from other cells in the brain as possible?
A) It has an extremely big soma that extends over a large surface area.
B) It has many branches off the dendrites.

C) It has a very long axon.
D) It has many terminal buttons.
Answer: B
Learning Objective: 2.1 Identify the anatomy and function of a neuron.
Topic: The Structure and Function of a Neuron
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

10. Hitting the send button on an e-mail releases the message to others. In this regard, it is similar to the _____ releasing chemicals to other cells.
A) axons
B) axon terminal
C) dendrites
D) nerves
Answer: B
Learning Objective: 2.1 Identify the anatomy and function of a neuron.
Topic: The Structure and Function of a Neuron
Difficulty Level: Moderate
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

11. When a cell is at rest, the inside of the cell is _____ the outside of the cell.
A) more positively charged than
B) more negatively charged than
C) equally charged as
D) less negatively charged than
Answer: B
Learning Objective: 2.1 Identify the anatomy and function of a neuron.
Topic: Communication Between Neurons
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway: 2.1.1
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

12. Which of the following neurons is most prepared to fire an action potential?
A) Neuron A is more positively charged on the inside of the cell.
B) Neuron B is equally charged on the inside and the outside of the cell.
C) Neuron C is more negatively charged on the inside of the cell.
D) Neuron D is less negatively charged on the inside of the cell.
Answer: C
Learning Objective: 2.2 Explain how neurons communicate with one another.
Topic: Communication Between Neurons
Difficulty Level: Moderate

Skill Level: Understand the Concepts
Adaptive Pathway: 2.1.1
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

13. Neurons are to _____ as people are to the suburbs.
A) nuclei
B) glands
C) networks
D) clefts
Answer: C
Learning Objective: 2.2 Explain how neurons communicate with one another.
Topic: Communication Between Neurons
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

14. Communication within the cell is _____, and communication between cells is _____.
A) chemical; electrical
B) electrical; chemical
C) electrical; electrical
D) chemical; chemical
Answer: B
Learning Objective: 2.2 Explain how neurons communicate with one another.
Topic: Communication Between Neurons
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

15. How do neurons become negatively charged on the inside of the cell?
A) Neurons contain ions that are negatively charged. The membrane of the neuron separates these ions such that more negatively charged ions are inside the cell, compared to outside the cell.
B) Neurons contain genes that are negatively charged. The membrane of the neuron keeps the genes from being able to cross and go outside of the cell.
C) Neurons contain chemicals that are negatively charged that are kept on the inside of the cell.
D) Neurons contain electrically charged hormones that can flow in and out of the cell unimpeded.
Answer: A
Learning Objective: 2.2 Explain how neurons communicate with one another.
Topic: Communication Between Neurons
Difficulty Level: Difficult
Skill Level: Analyze It

Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

16. Positively and negatively charged ions are separated across the membrane of the cell; this separation results in a state of tension where more negatively charged ions are inside the of the cell. This state is known as the _____.
A) action potential
B) resting potential
C) neural impulse
D) synaptic gap
Answer: B
Learning Objective: 2.2 Explain how neurons communicate with one another.
Topic: Communication Between Neurons
Difficulty Level: Moderate
Skill Level: Remember the Facts
Adaptive Pathway: 2.1.1
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

17. Christopher grabs a rubber band, pulls it back, and shoots it at his sister. Letting go of the rubber band and it sailing through the air is similar to the _____ in a neuron.
A) resting potential
B) excitatory signal
C) action potential
D) inhibitory signal
Answer: C
Learning Objective: 2.2 Explain how neurons communicate with one another.
Topic: Communication Between Neurons
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway: 2.1.2
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

18. When positively charged ions enter the cell membrane, the cell becomes _____.
A) refractory
B) inhibitory
C) excitatory
D) depolarized
Answer: D
Learning Objective: 2.2 Explain how neurons communicate with one another.
Topic: Communication Between Neurons
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

19. Which of the following *best* represents the principle of the all-or-none law?

A) The fact that a cell must enter a refractory period after firing to restore its own resources.
B) The fact that a neurotransmitter is either excitatory or inhibitory, but never both.
C) The fact that once a cell reaches its threshold, it must fire and cannot be stopped.
D) The idea that cells in a network must all be excited at the same time for a behavior to occur.
Answer: C
Learning Objective: 2.2 Explain how neurons communicate with one another.
Topic: Communication Between Neurons
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

20. When a marathon runner finishes a race, they must take a break before running another race. This is very similar to the _____ period in the neuron.
A) rest
B) relax
C) refractory
D) replacement
Answer: C
Learning Objective: 2.2 Explain how neurons communicate with one another.
Topic: Communication Between Neurons
Difficulty Level: Moderate
Skill Level: Apply What You Know
Adaptive Pathway: 2.1.2
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

21. At a sporting event, fans often engage in doing the "wave." This is where one section of the stands rises to their feet with their arms extended over their head. As they return to their seat, the next section of the stands rises. This behavior continues all along the stands to the end. With respect to neurons, the wave is similar to the _____.
A) refractory period of the neuron
B) action potential of the neuron
C) resting potential of the neuron
D) depolarization of the neuron
Answer: B
Learning Objective: 2.2 Explain how neurons communicate with one another.
Topic: Communication Between Neurons
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway: 2.1.2
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

22. Why does the communication between cells become chemical when transferring a message from one neuron to another?

A) Because the cells can't store enough energy to keep the communication between cells electrical.
B) Because the cells are separated by a small gap, which prevents electrical communication from continuing.
C) Because electricity traveling with the action potential has degraded down the axon until it is too small to continue to the next cell.
D) Because chemicals reduce the variety of responses a cell can have during communication.

Answer: B
Learning Objective: 2.2 Explain how neurons communicate with one another.
Topic: Communication Between Neurons
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway: 2.1.3
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

23. For a time in the nineteenth century, mail was carried by the Pony Express. A horseback rider would take the mail and ride as fast as they could to the next Pony Express rider. Once there, they would pass the mail off to the next rider, who would take it further down the line until it arrived at its destination. This process is an analogy for the _____ in the neuron.
A) resting potential
B) action potential
C) refractory period
D) depolarization potential

Answer: B
Learning Objective: 2.2 Explain how neurons communicate with one another.
Topic: Communication Between Neurons
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway: 2.1.3
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

24. If a neuron "fires" and passes a signal along to the next neuron, it is considered a(n) _____ neuron.
A) electrical
B) inhibitory
C) active
D) excitatory

Answer: D
Learning Objective: 2.2 Explain how neurons communicate with one another.
Topic: Communication Between Neurons
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway: 2.1.3
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

25. You have been asked to pass a message on to your professor Dr. Smith. In this case, you are like a _____ neuron, sending a message to a _____ neuron.
    A) primary; secondary
    B) inhibitory; excitatory
    C) presynaptic; postsynaptic
    D) autonomic; somatic
    Answer: C
    Learning Objective: 2.2 Explain how neurons communicate with one another.
    Topic: Communication Between Neurons
    Difficulty Level: Difficult
    Skill Level: Apply What You Know
    Adaptive Pathway: 2.1.3
    APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

26. A key fitting into a lock is a clear analogy for _____.
    A) myelin wrapping around the axon
    B) neurotransmitter binding a receptor
    C) neurotransmitter being taken back up into the cell
    D) ion flow during an action potential
    Answer: B
    Learning Objective: 2.2 Explain how neurons communicate with one another.
    Topic: Communication Between Neurons
    Difficulty Level: Moderate
    Skill Level: Analyze It
    Adaptive Pathway: 2.1.3
    APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

27. Water balloons hold water. Similarly, neurons have _____ that contain neurotransmitter.
    A) vesicles
    B) cell bodies
    C) dendrites
    D) ion channels
    Answer: A
    Learning Objective: 2.2 Explain how neurons communicate with one another.
    Topic: Communication Between Neurons
    Difficulty Level: Difficult
    Skill Level: Apply What You Know
    Adaptive Pathway: 2.1.3
    APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

28. A neurotransmitter is released from the presynaptic neuron and binds to _____ on the postsynaptic neuron.
    A) vesicles
    B) axons

C) synapses
D) receptors
Answer: D
Learning Objective: 2.2 Explain how neurons communicate with one another.
Topic: Communication Between Neurons
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway: 2.1.3
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

29. A neurotransmitter in the synapse is recycled through a process called _____.
A) degradation
B) refraction
C) reuptake
D) firing
Answer: C
Learning Objective: 2.2 Explain how neurons communicate with one another.
Topic: Communication Between Neurons
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway: 2.1.3
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

30. Neurotransmitter C is a lazy neurotransmitter and once it is released into the synaptic gap, it wanders around avoiding any attachment to a receptor. Based on this behavior, what do you predict will happen to this neurotransmitter?
A) It will fall victim to reuptake without ever binding to a receptor.
B) It will eventually bind to a receptor because it will have nowhere else to go.
C) It will travel to other synaptic spaces.
D) It will be "escorted" by glial cells to a synapse nearby.
Answer: A
Learning Objective: 2.2 Explain how neurons communicate with one another.
Topic: Communication Between Neurons
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway: 2.1.3
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

31. Each neuron typically releases _____ type(s) of neurotransmitter into the synapse.
A) 1
B) 2
C) 3
D) 4
Answer: A
Learning Objective: 2.3 Recognize the effects of neurotransmitters on behavior.
Topic: Types of Neurotransmitters

Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

32. Jakim struggles with depression and anxiety and is visiting the doctor for some help. The doctor is most likely to prescribe a medication that will increase levels of _____ in his brain.
A) dopamine
B) acetylcholine
C) GABA
D) serotonin
Answer: D
Learning Objective: 2.3 Recognize the effects of neurotransmitters on behavior.
Topic: Types of Neurotransmitters
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

33. Brenna is having trouble moving her arms and legs. Studies show that her problem is most likely a lack of neurotransmitters reaching her muscles. Which of the following neurotransmitters is most likely absent near Brenna's muscles?
A) Dopamine
B) Serotonin
C) Glutamate
D) Acetylcholine
Answer: D
Learning Objective: 2.3 Recognize the effects of neurotransmitters on behavior.
Topic: Types of Neurotransmitters
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

34. Your mother comes home and sadly announces that your grandpa was diagnosed with Alzheimer's disease. Having just read about this in your psychology class, you know that this is a disorder associated with _____.
A) high levels of serotonin
B) low levels of dopamine
C) high levels of endorphins
D) low levels of acetylcholine
Answer: D
Learning Objective: 2.3 Recognize the effects of neurotransmitters on behavior.
Topic: Types of Neurotransmitters
Difficulty Level: Difficult

Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

35. A neurotransmitter's function is determined by the _____ it binds on the postsynaptic neuron.
A) vesicles
B) myelin
C) receptors
D) enzymes
Answer: C
Learning Objective: 2.3 Recognize the effects of neurotransmitters on behavior.
Topic: Types of Neurotransmitters
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

36. Cameron suffers from depression. A doctor is likely to give her a medication that increases the availability of _____ in her brain.
A) acetylcholine
B) dopamine
C) endorphins
D) serotonin
Answer: D
Learning Objective: 2.3 Recognize the effects of neurotransmitters on behavior.
Topic: Types of Neurotransmitters
Difficulty Level: Moderate
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

37. Olafur has been diagnosed with Parkinson's Disease. The doctor has given him medication to replace the neurotransmitter in his brain that is too low. The goal of this drug is to increase the levels of _____ in his brain.
A) serotonin
B) norepinephrine
C) GABA
D) dopamine
Answer: D
Learning Objective: 2.3 Recognize the effects of neurotransmitters on behavior.
Topic: Types of Neurotransmitters
Difficulty Level: Moderate
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

38. Emily suffers from seizures. It seems that these seizures are caused in part, by too little _____ in the brain.
    A) acetylcholine
    B) endorphins
    C) dopamine
    D) GABA
    Answer: D
    Learning Objective: 2.3 Recognize the effects of neurotransmitters on behavior.
    Topic: Types of Neurotransmitters
    Difficulty Level: Moderate
    Skill Level: Apply What You Know
    Adaptive Pathway:
    APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

39. Jake is suffering from a neuromuscular disorder called spasmodic torticollis. A treatment that would be helpful for him would be a type of _____ drug.
    A) dopamine agonist
    B) norepinephrine agonist
    C) acetylcholine antagonist
    D) serotonin antagonist
    Answer: C
    Learning Objective: 2.3 Recognize the effects of neurotransmitters on behavior.
    Topic: Types of Neurotransmitters
    Difficulty Level: Difficult
    Skill Level: Apply What You Know
    Adaptive Pathway:
    APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

40. Your friend, Josiah, is trying to stop smoking cold turkey, but having no luck. You try to explain the benefits of using a drug called Chantix. How do you explain to your friend how Chantix works?
    A) Chantix blocks any receptors that might bind nicotine, which will make him stop smoking immediately.
    B) Chantix is a drug that acts like very weak nicotine, thus cutting down on the cravings for nicotine.
    C) Chantix is a very powerful drug that soaks up the nicotine every time he smokes, so he won't get the benefit of the nicotine anymore.
    D) Chantix acts like very powerful nicotine so that when he smokes he will get nauseous and not want to smoke anymore.
    Answer: B
    Learning Objective: 2.3 Recognize the effects of neurotransmitters on behavior.
    Topic: Types of Neurotransmitters
    Difficulty Level: Difficult
    Skill Level: Apply What You Know
    Adaptive Pathway:

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

41. Synaptic _____ is the ability of the brain to adapt or change over time.
A) transmission
B) plasticity
C) reuptake
D) degradation
Answer: B
Learning Objective: 2.4 Distinguish the concepts of synaptic plasticity and neurogenesis.
Topic: Synaptic Plasticity and Neurogenesis
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

42. Synaptic plasticity can be explained as a(n) _____ synapses over time based on changes in synaptic activity.
A) increase in
B) strengthening or weakening in
C) decrease in
D) delay in activity of
Answer: B
Learning Objective: 2.4 Distinguish the concepts of synaptic plasticity and neurogenesis.
Topic: Synaptic Plasticity and Neurogenesis
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

43. If excess neurotransmitters are found in a synapse regularly, how might the receiving cell respond to this excess?
A) It will downregulate receptors on its surface.
B) It will upregulate receptors on its surface.
C) It will decrease the availability of enzymes in the synapse.
D) It will decrease reuptake.
Answer: A
Learning Objective: 2.4 Distinguish the concepts of synaptic plasticity and neurogenesis.
Topic: Synaptic Plasticity and Neurogenesis
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

44. You were introduced to a new person, Santos, and you find that as you talk more and more to Santos, your relationship with him strengthens. This experience can be likened to _____ in the brain.
    A) upregulation
    B) an action potential
    C) neural plasticity
    D) executive function
    Answer: C
    Learning Objective: 2.4 Distinguish the concepts of synaptic plasticity and neurogenesis.
    Topic: Synaptic Plasticity and Neurogenesis
    Difficulty Level: Difficult
    Skill Level: Analyze It
    Adaptive Pathway:
    APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

45. Jonquin is a brilliant pianist who practices six hours a day. What would you predict about Jonquin's brain?
    A) Jonquin will have one small set of cells in his brain dedicated to piano playing.
    B) Jonquin will have fewer cell connections for motor behaviors associated with piano playing.
    C) Jonquin will have more cell connections in his brain associated with piano playing.
    D) Jonquin's brain will look and behave the same way as any other brain.
    Answer: C
    Learning Objective: 2.4 Distinguish the concepts of synaptic plasticity and neurogenesis.
    Topic: Synaptic Plasticity and Neurogenesis
    Difficulty Level: Difficult
    Skill Level: Analyze It
    Adaptive Pathway:
    APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

46. One theory of neural plasticity states _____.
    A) the brain cannot make new connections, so it builds up smaller, previously underutilized connections
    B) the brain creates new connections, but only for behaviors that are not a priority to the person or animal
    C) the brain cannot make new cells, so once cells are lost in the brain, the behavior those cells guided will also be gone
    D) the brain can make new cells, but they are never functional
    Answer: A
    Learning Objective: 2.4 Distinguish the concepts of synaptic plasticity and neurogenesis.
    Topic: Synaptic Plasticity and Neurogenesis
    Difficulty Level: Moderate
    Skill Level: Understand the Concepts
    Adaptive Pathway:
    APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

47. Where in the brain have new neurons been found to be born?
    A) The amygdala and hypothalamus
    B) The hippocampus and olfactory bulb
    C) The hypothalamus and the olfactory bulb
    D) The hippocampus and cerebellum
    Answer: B
    Learning Objective: 2.4 Distinguish the concepts of synaptic plasticity and neurogenesis.
    Topic: Synaptic Plasticity and Neurogenesis
    Difficulty Level: Moderate
    Skill Level: Understand the Concepts
    Adaptive Pathway:
    APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

48. The birth of new cells is called _____.
    A) behavioral genetics
    B) neurogenesis
    C) upregulation
    D) neurofeedback
    Answer: B
    Learning Objective: 2.4 Distinguish the concepts of synaptic plasticity and neurogenesis.
    Topic: Synaptic Plasticity and Neurogenesis
    Difficulty Level: Easy
    Skill Level: Remember the Facts
    Adaptive Pathway:
    APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

49. Neurogenesis occurs in the hippocampus _____.
    A) only prenatally
    B) from birth to 12 years of age
    C) from adolescence through adulthood
    D) all through the lifespan
    Answer: D
    Learning Objective: 2.4 Distinguish the concepts of synaptic plasticity and neurogenesis.
    Topic: Synaptic Plasticity and Neurogenesis
    Difficulty Level: Easy
    Skill Level: Remember the Facts
    Adaptive Pathway:
    APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

50. The central nervous system is made up of _____.
    A) the spinal cord and peripheral nerves
    B) the brain and peripheral nerves
    C) the spinal cord and brain
    D) everything outside of the brain and spinal cord
    Answer: C
    Learning Objective: 2.5 Identify each division of the nervous system.

Topic: The Nervous System: Structure and Function
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

51. The peripheral nervous system is _____ the central nervous system.
A) internal to
B) external to
C) the same as
D) just above
Answer: B
Learning Objective: 2.5 Identify each division of the nervous system.
Topic: The Nervous System: Structure and Function
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

52. Sensory neurons carry information _____ the central nervous system and the motor neurons carry information _____ the central nervous system.
A) away from; toward
B) away from; away from
C) toward; toward
D) toward; away from
Answer: D
Learning Objective: 2.5 Identify each division of the nervous system.
Topic: The Nervous System: Structure and Function
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

53. Interneurons are exclusively located in the _____.
A) peripheral nervous system
B) brain
C) spinal cord
D) central nervous system
Answer: D
Learning Objective: 2.5 Identify each division of the nervous system.
Topic: The Nervous System: Structure and Function
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

54. Which of the following cells is found in the greatest numbers in the brain?
    A) Interneurons
    B) Sensory
    C) Motor
    D) Sympathetic
    Answer: A
    Learning Objective: 2.5 Identify each division of the nervous system.
    Topic: The Nervous System: Structure and Function
    Difficulty Level: Moderate
    Skill Level: Understand the Concepts
    Adaptive Pathway:
    APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

55. The blood-brain barrier is a _____.
    A) filter that keeps dangerous substances out of the brain
    B) mechanism for cells to stay negatively charged while at rest
    C) mechanism for the brain to easily exchange substances through the blood vessels in the brain
    D) way for the brain to get the excess oxygen it needs to the brain
    Answer: A
    Learning Objective: 2.5 Identify each division of the nervous system.
    Topic: The Nervous System: Structure and Function
    Difficulty Level: Moderate
    Skill Level: Understand the Concepts
    Adaptive Pathway:
    APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

56. Xuan consumed a food that contained a toxin. It had the potential to make him very sick; however, it never reached his brain, where it could do its harm. In this case, Xuan's _____ protected him from getting sick.
    A) reflexes
    B) glial cells
    C) stem cells
    D) blood-brain barrier
    Answer: D
    Learning Objective: 2.5 Identify each division of the nervous system.
    Topic: The Nervous System: Structure and Function
    Difficulty Level: Difficult
    Skill Level: Apply What You Know
    Adaptive Pathway:
    APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

57. Beverly accidentally places touched her hot flat iron. Her hand is withdrawn from the flat iron without any conscious thought. Beverly has just experienced a(n)_____.
    A) Moro reflex
    B) withdrawal reflex

C) interneuron response
D) refractory period
Answer: B
Learning Objective: 2.5 Identify each division of the nervous system.
Topic: The Nervous System: Structure and Function
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

58. What is the *most* accurate description of one of the characteristics of a reflex?
A) The reflex is driven by the peripheral nervous system.
B) The reflex is not under conscious control.
C) The reflex is an elaborate example of decision making.
D) The reflex is a response of the autonomic nervous system.
Answer: B
Learning Objective: 2.5 Identify each division of the nervous system.
Topic: The Nervous System: Structure and Function
Difficulty Level: Moderate
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

59. What is the correct order of cells involved in a reflex?
A) motor neuron, interneuron, sensory neuron
B) interneuron, sensory neuron, motor neuron
C) sensory neuron, motor neuron, interneuron
D) sensory neuron, interneuron, motor neuron
Answer: D
Learning Objective: 2.5 Identify each division of the nervous system.
Topic: The Nervous System: Structure and Function
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

60. What is the function of a withdrawal reflex?
A) To alert the brain to what is going on out in the periphery.
B) To protect the body from any further harm from interacting with an object.
C) To keep the brain from knowing what is going on out in the periphery.
D) To keep the brain from overreacting to the stimulus.
Answer: B
Learning Objective: 2.5 Identify each division of the nervous system.
Topic: The Nervous System: Structure and Function
Difficulty Level: Moderate
Skill Level: Understand the Concepts

Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

61. You cut your hand on a sharp edge of a counter top. Your reflexes cause your hand to withdraw from the sharp edge. When considering this reflex, which of these statements is accurate?
A) The pain signal will arrive at the brain at the same time as it interacts with the spinal cord.
B) The pain signal will arrive at the brain before it arrives at the spinal cord.
C) The pain signal will arrive at the brain after it arrives at the spinal cord.
D) The pain signal never arrives at the brain, as it exists only at the level of the spinal cord.
Answer: C
Learning Objective: 2.5 Identify each division of the nervous system.
Topic: The Nervous System: Structure and Function
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

62. Rolanda was in a car accident and severed her spinal cord at the lumbar area. What is the most likely outcome for Rolanda?
A) Rolanda will die as she will not be able to breathe on her own.
B) Rolanda's entire body will be paralyzed.
C) Rolanda's hips and legs will be paralyzed.
D) Rolanda will experience some immediate pain, but suffer no long-term consequences from the injury.
Answer: C
Learning Objective: 2.5 Identify each division of the nervous system.
Topic: The Nervous System: Structure and Function
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

63. According to statistics from the National Spinal Cord Injury Center, which of the following is the *most* likely way to incur a spinal cord injury?
A) Accidental fall
B) Acts of violence
C) Sports injury
D) Car accident
Answer: D
Learning Objective: 2.5 Identify each division of the nervous system.
Topic: The Nervous System: Structure and Function
Difficulty Level: Moderate
Skill Level: Understand the Concepts

Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

64. Joseph fell out a tree while he was hunting and broke his back. After being paralyzed for three years, he obtained an experimental medical procedure that implanted _____ into his spinal cord. These cells regenerated in his spinal cord and allowed him to begin to walk again.
A) glial cells
B) olfactory cells
C) hypothalamus cells
D) retinal cells
Answer: B
Learning Objective: 2.5 Identify each division of the nervous system.
Topic: The Nervous System: Structure and Function
Difficulty Level: Moderate
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

65. _____ cells have been transplanted into patients with spinal cord damage and have shown they can help with the recovery of functions lost after a spinal injury.
A) Glial
B) Somatosensory
C) Olfactory
D) Grey matter
Answer: C
Learning Objective: 2.5 Identify each division of the nervous system.
Topic: The Nervous System: Structure and Function
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

66. The activity of the somatic nervous system is _____, while the activity of the autonomic nervous system is _____.
A) unconscious and involuntary; unconscious and voluntary
B) conscious and voluntary; conscious and involuntary
C) conscious and voluntary; unconscious and involuntary
D) unconscious and voluntary; conscious and involuntary
Answer: C
Learning Objective: 2.5 Identify each division of the nervous system.
Topic: The Nervous System: Structure and Function
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

67. Jennifer is walking along the street, feeling the warmth of the summer wind on her skin. In order to have this experience, her _____ must be active.
A) sympathetic nervous system
B) parasympathetic nervous system
C) autonomic nervous system
D) somatic nervous system
Answer: D
Learning Objective: 2.5 Identify each division of the nervous system.
Topic: The Nervous System: Structure and Function
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

68. Gunter is walking down a dark alley when he hears a noise that sounds like a vicious dog. He feels his heart start racing and his mouth suddenly goes dry. Gunter has just experienced a rapid increase in his _____.
A) parasympathetic nervous system
B) sympathetic nervous system
C) somatic nervous system
D) central nervous system
Answer: B
Learning Objective: 2.5 Identify each division of the nervous system.
Topic: The Nervous System: Structure and Function
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

69. After riding the newest rollercoaster, you realize it takes some time for your body to calm down. This process of calming down involves the _____.
A) autonomic nervous system
B) parasympathetic nervous system
C) somatic nervous system
D) peripheral nervous system
Answer: B
Learning Objective: 2.5 Identify each division of the nervous system.
Topic: The Nervous System: Structure and Function
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

70. The bodily system that oversees hormones in our body is known as the _____.
A) nervous system

B) cardiovascular system
C) respiratory system
D) endocrine system
Answer: D
Learning Objective: 2.6 Recognize the purpose of the endocrine system and how some hormones influence health and behavior.
Topic: The Endocrine System
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

71. _____ is to the nervous system as _____ is to the endocrine system.
A) E-mail; the regular postal service
B) Slow; fast
C) Simplistic; complex
D) The regular postal service; e-mail
Answer: A
Learning Objective: 2.6 Recognize the purpose of the endocrine system and how some hormones influence health and behavior.
Topic: The Endocrine System
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

72. _____ are chemical messengers secreted by the glands into the bloodstream and regulate the activity of cells or organs.
A) Neurotransmitters
B) Endorphins
C) Hormones
D) Gonads
Answer: C
Learning Objective: 2.6 Recognize the purpose of the endocrine system and how some hormones influence health and behavior.
Topic: The Endocrine System
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

73. Amanda continues to gain weight over time. It is possible that her body has become _____-resistant.
A) glucose
B) leptin
C) melatonin

D) oxytocin
Answer: B
Learning Objective: 2.6 Recognize the purpose of the endocrine system and how some hormones influence health and behavior.
Topic: The Endocrine System
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

74. The conductor of a symphony directs all the musicians, much like the _____ directs all of the endocrine glands in the body.
A) amygdala
B) hippocampus
C) hypothalamus
D) medulla
Answer: C
Learning Objective: 2.6 Recognize the purpose of the endocrine system and how some hormones influence health and behavior.
Topic: The Endocrine System
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

75. The pituitary gland is known as the "master gland" because _____.
A) it regulates the hypothalamus, which regulates other hormones
B) it regulates all the other glands in the body
C) it is independent in its function
D) it is the largest gland found in the brain
Answer: B
Learning Objective: 2.6 Recognize the purpose of the endocrine system and how some hormones influence health and behavior.
Topic: The Endocrine System
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

76. The hypothalamus uses _____ to stimulate the pituitary gland to release its hormones.
A) thyroid hormones
B) prolactin
C) releasing hormones
D) oxytocin
Answer: C

Learning Objective: 2.6 Recognize the purpose of the endocrine system and how some hormones influence health and behavior.
Topic: The Endocrine System
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

77. Cristian is having trouble falling asleep each night. He has heard taking a hormone that stimulates sleep might help. What would you suggest he take?
A) Insulin
B) Glucagon
C) Melatonin
D) Cortisol
Answer: C
Learning Objective: 2.6 Recognize the purpose of the endocrine system and how some hormones influence health and behavior.
Topic: The Endocrine System
Difficulty Level: Moderate
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

78. What structure sits in the brain and directs the rest of the endocrine glands in the body to release or withhold their hormones?
A) Thyroid
B) Pituitary
C) Adrenal
D) Pineal
Answer: B
Learning Objective: 2.6 Recognize the purpose of the endocrine system and how some hormones influence health and behavior.
Topic: The Endocrine System
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

79. Jessica just had a baby and is breastfeeding for the first time. Her pituitary gland will have released which two hormones in response to the birth and breast feeding.
A) Thyroid and prolactin
B) Insulin and glucagon
C) Prolactin and oxytocin
D) Oxytocin and melatonin
Answer: C

Learning Objective: 2.6 Recognize the purpose of the endocrine system and how some hormones influence health and behavior.
Topic: The Endocrine System
Difficulty Level: Moderate
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

80. Melatonin is the only hormone that can be sold as a dietary supplement without the Food and Drug Administration approval. Why is this so?
A) Because it already exists naturally in some foods.
B) It is the only hormone that has been deemed harmless by numerous scientific studies.
C) It is the only hormone that has any therapeutic effect on the body.
D) Because it can be made synthetically and sold in capsules.
Answer: A
Learning Objective: 2.6 Recognize the purpose of the endocrine system and how some hormones influence health and behavior.
Topic: The Endocrine System
Difficulty Level: Moderate
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

81. Kaoni is often tired and has noticed that she is gaining weight. She decides to see a doctor, who orders bloodwork to measure the hormone levels in her body. Kaoni's symptoms are likely caused by low levels of which hormone?
A) Cortisol
B) Progesterone
C) Insulin
D) Thyroid
Answer: D
Learning Objective: 2.6 Recognize the purpose of the endocrine system and how some hormones influence health and behavior.
Topic: The Endocrine System
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

82. Diabetes occurs when the _____ does not produce enough insulin to keep blood sugar levels within a normal range.
A) thyroid
B) adrenal gland
C) pancreas
D) pineal gland
Answer: C

Learning Objective: 2.6 Recognize the purpose of the endocrine system and how some hormones influence health and behavior.
Topic: The Endocrine System
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

83. The _____ is/are to stress as the _____ is/are to sexual development.
A) adrenals; thyroid
B) pancreas; gonads
C) thyroid; pancreas
D) adrenals; gonads
Answer: D
Learning Objective: 2.6 Recognize the purpose of the endocrine system and how some hormones influence health and behavior.
Topic: The Endocrine System
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

84. _____ is associated with heart palpitations, sweating, diarrhea, increased appetite with weight loss, heat sensitivity, and bulging eyes.
A) Diabetes
B) Hypothyroidism
C) Hyperthyroidism
D) Adrenal gland malfunction
Answer: C
Learning Objective: 2.6 Recognize the purpose of the endocrine system and how some hormones influence health and behavior.
Topic: The Endocrine System
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

85. The pancreas produces which of the following hormones?
A) Cortisol and thyroid
B) Progesterone and testosterone
C) Prolactin and oxytocin
D) Insulin and glucagon
Answer: D
Learning Objective: 2.6 Recognize the purpose of the endocrine system and how some hormones influence health and behavior.
Topic: The Endocrine System

Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

86. Kyesha is walking across the street when out of nowhere comes a car blaring its horn at her. Kyesha feels a rush in her body as she jumps out of the way of the car. Which of the following glands is most active in Kyesha's response to the car?
A) Adrenal
B) Pancreas
C) Thyroid
D) Pituitary
Answer: A
Learning Objective: 2.6 Recognize the purpose of the endocrine system and how some hormones influence health and behavior.
Topic: The Endocrine System
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

87. Cortisol release is associated with which of the following changes in the body?
A) The release of leptin from the pancreas.
B) An increase in blood sugar; increased metabolism of fat, protein, and carbohydrates; and suppression of the immune system.
C) A slowing of the heart rate, constriction of the pupils, and increased digestion.
D) A decrease in blood sugar, increased metabolism of protein, and stimulation of respiratory breathing.
Answer: B
Learning Objective: 2.6 Recognize the purpose of the endocrine system and how some hormones influence health and behavior.
Topic: The Endocrine System
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

88. Different methodologies for studying the brain vary in their examination of _____.
A) structure and function of the brain
B) neurotransmitters and hormones in the brain
C) dendrites versus axons in the brain
D) grey matter and white matter
Answer: A
Learning Objective: 2.7 Differentiate structural and functional methods of studying the brain.
Topic: Methods of Studying the Brain

Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

89. Structural questions of the brain focus on the _____ and the functional questions focus on the _____.
A) when; where
B) what and where; how
C) how; what and where
D) why; how
Answer: B
Learning Objective: 2.7 Differentiate structural and functional methods of studying the brain.
Topic: Methods of Studying the Brain
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

90. Dr. Contrar _____ a part of the brain of his rat. The rat was no longer interested in eating, so Dr. Contrar concluded that part of the brain is important in feeding behavior.
A) measured electrical activity in
B) lesioned
C) imaged
D) x-rayed
Answer: B
Learning Objective: 2.7 Differentiate structural and functional methods of studying the brain.
Topic: Methods of Studying the Brain
Difficulty Level: Moderate
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

91. A _____ scan is to structure, as a(n)_____ is to function.
A) MRI; CT
B) PET; EEG
C) CT; PET
D) MEG; EEG
Answer: C
Learning Objective: 2.7 Differentiate structural and functional methods of studying the brain.
Topic: Methods of Studying the Brain
Difficulty Level: Difficult
Skill Level: Analyze It

Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

92. A(n) _____ involves a machine that takes a series of x-rays from many different perspectives.
A) PET scan
B) EEG
C) MRI
D) CT scan
Answer: D
Learning Objective: 2.7 Differentiate structural and functional methods of studying the brain.
Topic: Methods of Studying the Brain
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

93. Claudius was accidentally hit in the head with a baseball. The doctor is most concerned about a skull fracture. Which method would be best to discover if Claudius's skull is cracked?
A) PET scan
B) MEG
C) EEG
D) CT scan
Answer: D
Learning Objective: 2.7 Differentiate structural and functional methods of studying the brain.
Topic: Methods of Studying the Brain
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

94. A(n) _____ uses a large magnet that "excites" and aligns hydrogen atoms in the area of interest in the body.
A) MRI scan
B) CT scan
C) EEG
D) PET scan
Answer: A
Learning Objective: 2.7 Differentiate structural and functional methods of studying the brain.
Topic: Methods of Studying the Brain
Difficulty Level: Easy
Skill Level: Remember the Facts

Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

95. What is one advantage of an MRI over a CT scan?
A) It is less expensive to administer.
B) It measures both structure and function.
C) It does not require the use of radiation.
D) It is more efficient in diagnosing sleep issues.
Answer: C
Learning Objective: 2.7 Differentiate structural and functional methods of studying the brain.
Topic: Methods of Studying the Brain
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

96. Yokum was in a car accident, and the emergency room staff feared he had swelling in his brain. Which procedure would they most likely use to detect the swelling after he arrives at the ER?
A) CT scan
B) EEG
C) PET scan
D) MEG
Answer: A
Learning Objective: 2.7 Differentiate structural and functional methods of studying the brain.
Topic: Methods of Studying the Brain
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

97. Terrika was admitted to the hospital for observation. The doctors ordered a test that involved placing electrodes directly on her scalp. The doctors were conducting a(n) _____ on Terrika.
A) MRI
B) PET scan
C) CT scan
D) EEG
Answer: D
Learning Objective: 2.7 Differentiate structural and functional methods of studying the brain.
Topic: Methods of Studying the Brain
Difficulty Level: Difficult
Skill Level: Apply What You Know

Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

98. Doctors are concerned that Luis has epilepsy. To begin to assess if he might be suffering from seizures, what method of studying the brain might they use?
A) MRI
B) CT scan
C) EEG
D) MEG
Answer: C
Learning Objective: 2.7 Differentiate structural and functional methods of studying the brain.
Topic: Methods of Studying the Brain
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

99. Which of the following procedures requires the use of a magnet?
A) CT scan
B) EEG
C) MRI
D) MEG
Answer: D
Learning Objective: 2.7 Differentiate structural and functional methods of studying the brain.
Topic: Methods of Studying the Brain
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

100. Which of the following procedures is often used during surgical planning because of its high temporal and spatial resolution?
A) MRI
B) CT scan
C) EEG
D) MEG
Answer: D
Learning Objective: 2.7 Differentiate structural and functional methods of studying the brain.
Topic: Methods of Studying the Brain
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

101. Dr. Glease is interested in measuring the amount of activity in specific areas of the brain during a reading task. Which of the following methods is the *best* method for Dr. Glease to use for his study?
A) EEG
B) MRI
C) MEG
D) PET
Answer: D
Learning Objective: 2.7 Differentiate structural and functional methods of studying the brain.
Topic: Methods of Studying the Brain
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

102. On a PET scan, the brightest colors indicate _____ activity.
A) more
B) less
C) normal
D) abnormal
Answer: A
Learning Objective: 2.7 Differentiate structural and functional methods of studying the brain.
Topic: Methods of Studying the Brain
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

103. Which of the following methods measures changes in blood flow in the brain?
A) PET
B) EEG
C) MEG
D) fMRI
Answer: D
Learning Objective: 2.7 Differentiate structural and functional methods of studying the brain.
Topic: Methods of Studying the Brain
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

104. Dr. Bowers wants to measure what areas of the brain are most active while participants are attempting to solve a math problem. Dr. Bowers will most likely use a(n) _____.
A) MRI
B) EEG
C) MEG
D) fMRI
Answer: D
Learning Objective: 2.7 Differentiate structural and functional methods of studying the brain.
Topic: Methods of Studying the Brain
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

105. A head injury to which area of the brain would most likely lead to death?
A) Hypothalamus
B) Medulla
C) Pons
D) Reticular formation
Answer: B
Learning Objective: 2.8 Distinguish important anatomical areas of the brain and their functions.
Topic: The Anatomy of the Brain
Difficulty Level: Easy
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

106. Amaya was in a car accident and suffered a serious head injury. She now has difficulty with balance and coordination. Which part of Amaya's brain was likely damaged in the accident?
A) Limbic system
B) Frontal lobes
C) Cerebellum
D) Medulla
Answer: C
Learning Objective: 2.8 Distinguish important anatomical areas of the brain and their functions.
Topic: The Anatomy of the Brain
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

107. Electric stimulation to this area of the brain would likely lead to improved attention.

A) Hindbrain
B) Reticular formation
C) Cerebellum
D) Hippocampus
Answer: B
Learning Objective: 2.8 Distinguish important anatomical areas of the brain and their functions.
Topic: The Anatomy of the Brain
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

108. The substantia nigra appears very dark in the brain because of the high concentration of neurons containing _____.
A) serotonin
B) dopamine
C) norepinephrine
D) acetylcholine
Answer: B
Learning Objective: 2.8 Distinguish important anatomical areas of the brain and their functions.
Topic: The Anatomy of the Brain
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

109. The thalamus, hypothalamus, basal ganglia, amygdala, and hippocampus comprise the _____.
A) limbic system
B) forebrain
C) reticular activating system
D) parietal lobe
Answer: A
Learning Objective: 2.8 Distinguish important anatomical areas of the brain and their functions.
Topic: The Anatomy of the Brain
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

110. The _____ is considered the relay station of the brain because of the way it gathers information and then sends it to the appropriate areas of the brain.
A) cerebellum

B) medulla
C) hypothalamus
D) thalamus
Answer: D
Learning Objective: 2.8 Distinguish important anatomical areas of the brain and their functions.
Topic: The Anatomy of the Brain
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway: 2.2.3
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

111. Benji has just been diagnosed with Huntington's disease and one of his symptoms includes writhing muscle spasms. Which area of the brain is most likely responsible for this symptom?
A) Hippocampus
B) Thalamus
C) Reticular formation
D) Basal ganglia
Answer: D
Learning Objective: 2.8 Distinguish important anatomical areas of the brain and their functions.
Topic: The Anatomy of the Brain
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway: 2.2.3
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

112. Justicia has recently been diagnosed with a brain tumor. Some of her initial symptoms included unexplained and excessive fear and anger. Which brain structure is likely affected by the tumor?
A) Amygdala
B) Medulla
C) Reticular formation
D) Hypothalamus
Answer: A
Learning Objective: 2.8 Distinguish important anatomical areas of the brain and their functions.
Topic: The Anatomy of the Brain
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway: 2.2.3
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

113. Chin-Sun has a case of viral encephalitis that damaged a specific area of his brain. He now lives a moment-by-moment existence because he can no longer form new memories. The area of his brain impacted by the virus was most likely the _____.
A) basal ganglia
B) substantia nigra
C) hippocampus
D) hypothalamus
Answer: C
Learning Objective: 2.8 Distinguish important anatomical areas of the brain and their functions.
Topic: The Anatomy of the Brain
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway: 2.2.3
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

114. The _____ lobes are in the rear of the skull and the _____ lobes are located above the ears.
A) occipital; parietal
B) occipital; temporal
C) temporal; parietal
D) temporal; occipital
Answer: B
Learning Objective: 2.8 Distinguish important anatomical areas of the brain and their functions.
Topic: The Anatomy of the Brain
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway: 2.2.1
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

115. Glenda is listening to her favorite music. She is currently using her _____ to process what she is hearing.
A) pons
B) temporal lobes
C) parietal lobes
D) occipital lobes
Answer: B
Learning Objective: 2.8 Distinguish important anatomical areas of the brain and their functions.
Topic: The Anatomy of the Brain
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway: 2.2.2
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

116. Gerheim was in a car accident and hit his head on the steering wheel. As a result of the accident, he is having problems with his vision. He most likely damaged his _____ lobe.
A) frontal
B) temporal
C) parietal
D) occipital
Answer: D
Learning Objective: 2.8 Distinguish important anatomical areas of the brain and their functions.
Topic: The Anatomy of the Brain
Difficulty Level: Moderate
Skill Level: Apply What You Know
Adaptive Pathway: 2.2.2
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

117. Gustav is trying to decide which car to buy for his business. In considering the pros and cons and anticipating his needs in the future, he is using his _____ lobe.
A) frontal
B) parietal
C) temporal
D) occipital
Answer: A
Learning Objective: 2.8 Distinguish important anatomical areas of the brain and their functions.
Topic: The Anatomy of the Brain
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway: 2.2.2
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

118. Kai suffered brain damage and now has difficulty understanding what is being said to him. However, he can speak to others with no problem, but sometimes what he says doesn't make sense. What area of his brain was most likely impacted by the brain damage?
A) Wernicke's area
B) Broca's area
C) the corpus callosum
D) the limbic system
Answer: A
Learning Objective: 2.8 Distinguish important anatomical areas of the brain and their functions.
Topic: The Anatomy of the Brain
Difficulty Level: Difficult
Skill Level: Analyze It

Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

119. The somatosensory cortex is located in the _____ lobes.
A) frontal
B) parietal
C) temporal
D) occipital
Answer: B
Learning Objective: 2.8 Distinguish important anatomical areas of the brain and their functions.
Topic: The Anatomy of the Brain
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway: 2.2.2
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

120. On the somatosensory homunculus, which of these body parts is most highly represented?
A) The hands
B) The back
C) The toes
D) The elbow
Answer: A
Learning Objective: 2.8 Distinguish important anatomical areas of the brain and their functions.
Topic: The Anatomy of the Brain
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

121. What part of the brain is located in front of the occipital lobes and just above the ears?
A) The parietal lobe
B) The frontal lobe
C) The temporal lobe
D) The motor cortex
Answer: C
Learning Objective: 2.8 Distinguish important anatomical areas of the brain and their functions.
Topic: The Anatomy of the Brain
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway: 2.2.1
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

122. Dr. Gallatin is interested in understanding how an injury to the brain impacts behavior. He likely practices _____.
A) behavioral genetics
B) neuroscience
C) neuropsychology
D) behavior therapy
Answer: C
Learning Objective: 2.9 Analyze how damage to the brain affects behavior.
Topic: The Effects of Brain Damage
Difficulty Level: Moderate
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.2 Develop a working knowledge of the content domains of psychology.

123. What was the primary behavioral change in Phineas Gage after an iron rod pierced his brain?
A) His personality was different.
B) His memory was worse.
C) His fear was greater.
D) He was unable to speak.
Answer: A
Learning Objective: 2.9 Analyze how damage to the brain affects behavior.
Topic: The Effects of Brain Damage
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

124. Something as simple as regularly "heading" the ball in soccer has been shown to result in _____.
A) poorer cognitive performance
B) impaired vision
C) seizures
D) personality change
Answer: A
Learning Objective: 2.9 Analyze how damage to the brain affects behavior.
Topic: The Effects of Brain Damage
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

125. The _____ connects the two hemispheres of the brain.
A) pons
B) cerebellum
C) corpus callosum

D) reticular formation
Answer: C
Learning Objective: 2.10 Recognize the functional impairments that occur in a split-brain patient.
Topic: The Divided Brain
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

126. Jorge has had a stroke and now finds he has trouble moving his left arm and leg. According to information in the text, where would the stroke have occurred in Jorge's brain?
A) The right hemisphere
B) The left hemisphere
C) Both hemispheres
D) The brainstem area
Answer: A
Learning Objective: 2.10 Recognize the functional impairments that occur in a split-brain patient.
Topic: The Divided Brain
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

127. For the majority of people, language is dominant in _____ of the brain.
A) the right hemisphere
B) the left hemisphere
C) both hemispheres
D) Broca's area
Answer: B
Learning Objective: 2.10 Recognize the functional impairments that occur in a split-brain patient.
Topic: The Divided Brain
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

128. Recognizing conscious and unconscious emotions in others is most likely lateralize in _____.
A) the limbic system
B) the left hemisphere of the brain
C) the right hemisphere of the brain
D) Wernicke's area

Answer: C
Learning Objective: 2.10 Recognize the functional impairments that occur in a split-brain patient.
Topic: The Divided Brain
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

129. If someone who has had their corpus callosum severed was shown a picture of a cupcake in their left visual field, what will they be able to tell the experimenter about the object they see?
A) They would tell the experimenter they saw a cupcake.
B) They would tell the experimenter they saw a dessert.
C) They wouldn't say anything because they wouldn't be able to speak.
D) They would tell the experimenter they saw nothing.
Answer: D
Learning Objective: 2.10 Recognize the functional impairments that occur in a split-brain patient.
Topic: The Divided Brain
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

130. Why might someone elect to have a callosotomy?
A) They have schizophrenia.
B) They have severe depression.
C) They have severe epilepsy.
D) They have a head injury on only one side of the brain.
Answer: C
Learning Objective: 2.10 Recognize the functional impairments that occur in a split-brain patient.
Topic: The Divided Brain
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

131. Dr. Constantine studies how the interaction of genes and the environment determine how someone responds to stress. Dr. Constantine is a _____.
A) biological psychologist
B) environmental psychologist
C) behavioral geneticist
D) neuropsychologist
Answer: C

Learning Objective: 2.11 Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
Topic: The Basics of Genetics and Behavior
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

132. When considering the influence of genes on behavior, what conclusion might be drawn?
A) Genes ultimately control the behaviors we engage in every day.
B) Genes cannot fully explain traits and behaviors in individuals.
C) Genes and behavior are unrelated.
D) Genes exert a stronger influence on behavior in calm and low-stress environments.
Answer: B
Learning Objective: 2.11 Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
Topic: The Basics of Genetics and Behavior
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

133. Normal cells have _____ pairs of chromosomes.
A) 13
B) 23
C) 39
D) 46
Answer: B
Learning Objective: 2.11 Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
Topic: The Basics of Genetics and Behavior
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

134. Genes located in the same position on a pair of chromosomes are called _____.
A) dominant
B) recessive
C) homozygous
D) alleles
Answer: D
Learning Objective: 2.11 Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
Topic: The Basics of Genetics and Behavior
Difficulty Level: Easy

Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

135. The physical expression of eye color is referred to as a _____.
A) genotype
B) phenotype
C) dominant trait
D) chromosomal abnormality
Answer: B
Learning Objective: 2.11 Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
Topic: The Basics of Genetics and Behavior
Difficulty Level: Moderate
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

136. The idea that a unit of heredity comes in pairs (i.e., chromosomes) and that one unit can dominate another is known as _____.
A) being heterozygous
B) being homozygous
C) Mendelian heredity
D) phenotype
Answer: C
Learning Objective: 2.11 Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
Topic: The Basics of Genetics and Behavior
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

137. Identical pairs of alleles are referred to as _____.
A) homozygous
B) heterozygous
C) dominant
D) recessive
Answer: A
Learning Objective: 2.11 Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
Topic: The Basics of Genetics and Behavior
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

138. According to Mendelian heredity, dominant genes will _____.
A) always determine the phenotype of the individual
B) always determine the genotype of the individual
C) always be overridden by a recessive gene
D) prevail over a recessive gene 50 percent of the time
Answer: A
Learning Objective: 2.11 Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
Topic: The Basics of Genetics and Behavior
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

139. Levi was born with blue eyes; however, both his biological parents have brown eyes. How can this be explained?
A) Both parents were homozygous for brown eyes.
B) Both parents were homozygous for blue eyes.
C) Both parents were heterozygous for brown eyes.
D) One parent was homozygous for brown eyes and the other parent was homozygous for blue eyes.
Answer: C
Learning Objective: 2.11 Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
Topic: The Basics of Genetics and Behavior
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

140. Genes do not control traits and behaviors directly, but rather through the indirect process of the production of _____.
A) fats
B) carbohydrates
C) proteins
D) amino acids
Answer: C
Learning Objective: 2.11 Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
Topic: The Basics of Genetics and Behavior
Difficulty Level: Moderate
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

141. The complete set of human genetic instructions is called the _____.
A) phenotype
B) genotype
C) polygenic inheritance
D) genome
Answer: D
Learning Objective: 2.11 Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
Topic: The Basics of Genetics and Behavior
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

142. Most human traits and behaviors are the result of _____.
A) Mendelian heritability
B) polygenic inheritance
C) single genes
D) two alleles
Answer: B
Learning Objective: 2.11 Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
Topic: The Basics of Genetics and Behavior
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

143. About what percent of the human genome is responsible for psychological and physiological differences?
A) 1
B) 35
C) 75
D) 99
Answer: A
Learning Objective: 2.11 Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
Topic: The Basics of Genetics and Behavior
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

144. The Human Genome Project concluded that the human genome contains approximately _____ genes.
A) 1,000

B) 5,000
C) 15,000
D) 20,000
Answer: D
Learning Objective: 2.11 Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
Topic: The Basics of Genetics and Behavior
Difficulty Level: Moderate
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

145. _____ refers to the degree to which genetics explain the variability in our phenotypes.
A) The Human Genome
B) Heritability
C) Epigenetics
D) Phenotypic differences
Answer: B
Learning Objective: 2.12 Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
Topic: Behavioral Genetics and Epigenetics
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

146. If certain traits were based primarily on environmental factors, heritability would explain these individual differences _____.
A) to a greater degree
B) to a lesser degree
C) equally
D) completely
Answer: B
Learning Objective: 2.12 Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
Topic: Behavioral Genetics and Epigenetics
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

147. Which of the following pairs of traits represents a characteristic with high heritability and a characteristic with low heritability, respectively?
A) eye color; personality
B) intelligence; widow's peak hairline

C) food preferences; personality
D) eye color; widow's peak hairline
Answer: A
Learning Objective: 2.12 Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
Topic: Behavioral Genetics and Epigenetics
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

148. If a behavioral geneticist was interested in examining the relative influence of genes and environment on the development of personality, they would prefer to conduct research with which pair of people?
A) Lynette and Paulette, identical twin sisters who were raised by two adoptive families.
B) Bert and Bob, identical twin brothers who were raised together by their biological parents.
C) Xioa and Xuan, a father-and-son pair who live together.
D) José and Kaela, complete strangers who live across the country from each other.
Answer: A
Learning Objective: 2.12 Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
Topic: Behavioral Genetics and Epigenetics
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

149. Azizi and Abasi are identical twins who are raised apart. Azizi is raised by a poor family in Kenya, where they struggle to find food and clothing. Abasi is raised by a rich family that provides him with tutors for his schooling and plentiful food and clothes. When Azizi and Abasi are reunited, tests indicate that Abasi scored 25 points higher on an intelligence test than Azizi. What might a behavioral geneticist conclude?
A) Intelligence can be influenced by environment
B) Intelligence is purely genetic
C) Intelligence is influenced by genetics and environment equally
D) Intelligence is not influenced by either genetics or environment
Answer: A
Learning Objective: 2.12 Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
Topic: Behavioral Genetics and Epigenetics
Difficulty Level: Moderate
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

150. According to the research described in your textbook, identical twins raised apart have more _____ personalities than twins raised in the same family.
A) similar
B) dissimilar
C) outgoing
D) introverted
Answer: B
Learning Objective: 2.12 Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
Topic: Behavioral Genetics and Epigenetics
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

151. Beyond identical twins raised together or apart, what other population is likely to be used by behavioral geneticists to study the influence of genetics and environment?
A) Communes, where the environment is the same for everyone but few people are related
B) Families that have adopted a child
C) Children who were removed from their homes due to abuse
D) Families that have moved a number of times and therefore have children who have lived in different environments
Answer: B
Learning Objective: 2.12 Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
Topic: Behavioral Genetics and Epigenetics
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

152. The field of _____ has shown that genes may turn on or off depending on an individual's environment.
A) Mendelian genetics
B) neuroscience
C) epigenetics
D) biological psychology
Answer: C
Learning Objective: 2.12 Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
Topic: Behavioral Genetics and Epigenetics
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

153. Epigenetics refers to a change in _____ without a change in _____.
A) environment; genes
B) phenotype; environment
C) environment; genes
D) phenotype; genotype
Answer: D
Learning Objective: 2.12 Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
Topic: Behavioral Genetics and Epigenetics
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

154. Research on obesity demonstrates there may be a genetic predisposition toward obesity, but whether you become obese may depend on _____.
A) if obesity is polygenic in your family
B) family eating habits and if there is a relationship between stress and eating
C) whether you are born to parents who have a heterozygous inheritance of the obesity gene
D) whether you are able to boost your metabolism with medication
Answer: B
Learning Objective: 2.12 Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
Topic: Behavioral Genetics and Epigenetics
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

155. The text describes a follow-up story showcasing contestants from the television show "The Biggest Loser". What was the outcome for these contestants?
A) Most contestants gained the weight back after leaving the show.
B) Most contestants kept the weight off for a prolonged period of time.
C) Most contestants experienced an increase in their resting metabolic rate.
D) Most contestants were free of any health issues years after being on the show.
Answer: A
Learning Objective: 2.12 Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
Topic: Behavioral Genetics and Epigenetics
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

156. _____ involves the use of a small medical device that sends electrical signals directly into a patient's brain.
A) An EEG
B) Magnetoencephalography (MEG)
C) Deep brain stimulation (DBS)
D) An fMRI
Answer: C
Learning Objective: 2.13 Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
Topic: Piecing It Together: Deep Brain Stimulation
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

157. The small medical device used in deep brain stimulation is called a(n) _____.
A) oscilloscope
B) lesioner
C) neurostimulator
D) cerebralstimulator
Answer: C
Learning Objective: 2.13 Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
Topic: Piecing It Together: Deep Brain Stimulation
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

158. The benefit of deep brain stimulation over other psychosurgeries is that it _____.
A) does not create any permanent changes in the brain
B) directly delivers medication to the brain where psychosurgery merely severs neural connections
C) slowly creates lesions in the brain in the desired places, which reduces the amount of recovery time needed
D) reduces the number of connections in the brain
Answer: A
Learning Objective: 2.13 Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
Topic: Piecing It Together: Deep Brain Stimulation
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

159. Deep brain stimulation was originally developed to treat _____.

A) depression
B) movement disorders
C) chronic pain
D) obsessive-compulsive disorder
Answer: B
Learning Objective: 2.13 Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
Topic: Piecing It Together: Deep Brain Stimulation
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

160. Constantine has been receiving deep brain stimulation for Parkinson's disease. He had electrodes implanted directly in his _____, which resulted in improved motor functioning.
A) hippocampus
B) cerebellum
C) prefrontal cortex
D) basal ganglia
Answer: D
Learning Objective: 2.13 Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
Topic: Piecing It Together: Deep Brain Stimulation
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

161. Symptoms of obsessive compulsive disorder are thought to arise from the connection between the _____ and the prefrontal cortex.
A) amygdala
B) thalamus
C) nucleus accumbens
D) hippocampus
Answer: C
Learning Objective: 2.13 Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
Topic: Piecing It Together: Deep Brain Stimulation
Difficulty Level: Easy
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

162. Many efficacy studies examining deep brain stimulation include only very small sample sizes. Why might this occur?

A) Researchers aren't convinced it will work so they don't recruit many participants for their studies.
B) Deep brain stimulation has long-term negative side effects that scare people away from participating.
C) The surgery required to implant the electrodes for deep brain stimulation is invasive.
D) The disorders targeted for treatment by DBS are so rare that it is difficult to find enough people to participate in a valid research study.

Answer: C
Learning Objective: 2.13 Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
Topic: Piecing It Together: Deep Brain Stimulation
Difficulty Level: Moderate
Skill Level: Remember the Facts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

Short-Answer Questions

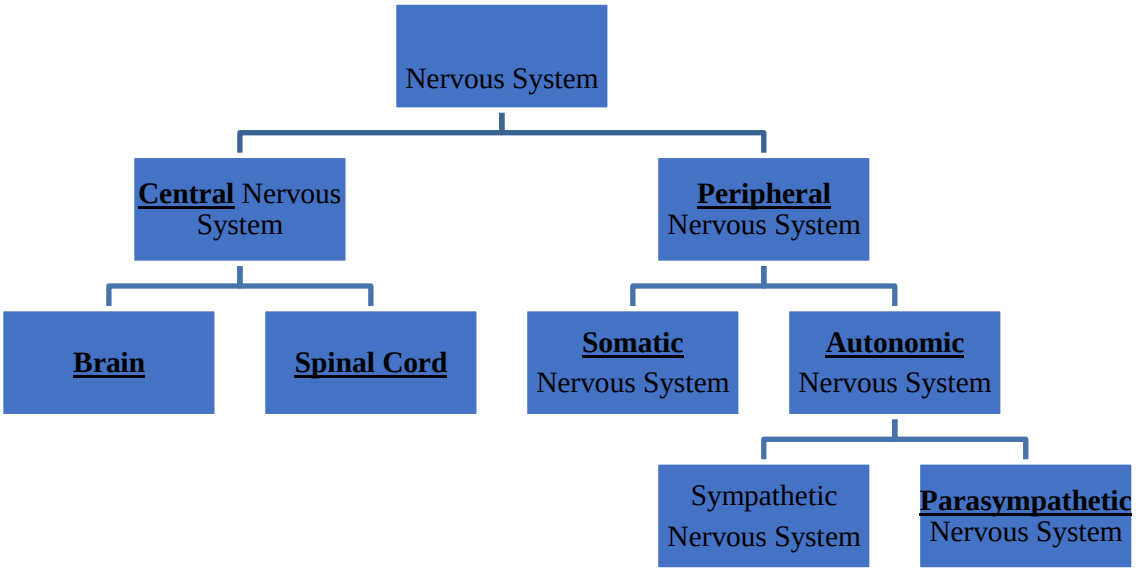
163. Summarize the steps of an action potential and neurotransmission.
Answers will vary, but should contain the following for full credit:
Depolarization of the neuron
Action potential travels down axon to the terminal buttons (axon terminal)
Vesicles release neurotransmitter
Neurotransmitter binds to receptors on the next neuron
Binding of neurotransmitter causes excitation or inhibition in receiving cell
Learning Objective: 2.2 Explain how neurons communicate with one another.
Topic: Communication Between Neurons
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway: AP 2.1.2 and 2.1.3
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

164. How is neurotransmission stopped?
Answers will vary but should contain the following for full credit:
Neurotransmitter released into the synapse will either be taken back up by the presynaptic cell through the process of reuptake, or if left in the synapse, it will be broken down by enzymes.
Learning Objective: 2.2 Explain how neurons communicate with one another.
Topic: Communication Between Neurons
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway: AP 2.1.3
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

165. List five neurotransmitters and indicate a primary function for each of those neurotransmitters.
Answer (any five of the following):
Acetylcholine: arousal; attention and memory; muscle contractions
Dopamine: feelings of pleasure; learning and memory; movement
Serotonin: arousal and sleep; mood; appetite
Norepinephrine: alertness and arousal; mood
GABA: sleep; inhibits movement
Glutamate: learning and memory; synaptic plasticity
Endorphins: blocks pain signals; produces feelings of pleasure; regulates immune system dysfunction
Learning Objective: 2.3 Recognize the effects of neurotransmitters on behavior.
Topic: Types of Neurotransmitters
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway: 2.1.3
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

166. Describe the difference between agonists and antagonists.
Answers will vary but should contain the following for full credit:
An agonist binds to a receptor and produces a biological response similar to what would have been produced by the neurotransmitter. The response can be either excitatory or inhibitory in terms of its effects on the postsynaptic, or receiving neuron. An antagonist also binds to receptors, but instead of producing a biological effect, it blocks the effects of any other neurochemical that may want to bind at that same receptor.
Learning Objective: 2.3 Recognize the effects of neurotransmitters on behavior.
Topic: Types of Neurotransmitters
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway: 2.1.3
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

167. Diagram the divisions of the nervous system.
Answer:



Learning Objective: 2.5 Identify each division of the nervous system.
Topic: The Nervous System: Structure and Function
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

168. Provide an example of a reflex. In your description, include the role of the various types of neurons involved in the reflex and where these neurons are located. Include in your description the role of a reflex.
Answer: (Student examples may vary with regard to the triggering event.)
You are walking along and step on a nail in a board. Immediately the sensory neuron located in your foot picks up the information about being exposed to something harmful. That sensory neuron will transfer the message to the spinal cord where it will communicate with an interneuron, which will, simultaneously pass the information to a motor neuron and send the message up to the brain. The motor neuron travels back to the muscles of the foot and leg and causes an immediate withdrawal reflex to remove your foot from the nail. The function of this unconscious reflex is to keep any further harm from happening to your foot.
Learning Objective: 2.5 Identify each division of the nervous system.
Topic: The Nervous System: Structure and Function
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

169. Differentiate between structural and functional methods of studying the brain by describing one structural method and one functional method. In your description, give an example of the type of question that might be answered by using that method.
Answers will vary but should contain the following for full credit.
Students may choose one of the following as an example of a structural method.

- CT: Computed tomography involves a machine that take a series of x-rays from many different perspectives. It provides a two-dimensional image of the structures of the brain. CTs are best used for identifying skull fractures or changes in density like tumors.
- MRI: A magnetic resonance imaging scanner uses magnets to align hydrogen atoms in the area of interest in the body. Another magnet is pulsed on and off and causes the hydrogen atoms to return to a state of equilibrium. This data is converted into a detailed picture of the structure being imaged. MRIs can help identify structural changes in the brain, so tumors and lesions are easily seen with this method.

Students may choose any of the following as an example of a functional method.

- EEG: An electroencephalogram measures the electrical activity of the brain. It is best used for identifying sleep disorders, epilepsy, and brain death.
- MEG: A magnetoencephalography measures magnetic fields in the brain. It provides accurate information about activity in the brain. It is mostly used for surgical planning; however, it has been used to study language development, epilepsy, and schizophrenia.
- PET: A positron emission tomography produces a three-dimensional image of the function of the brain. Radioactive glucose is injected, and the most active areas take up the most glucose as indicated by the brighter colors of the scan. PET scans are largely used experimentally to see if specific areas of the brain are differentially active in people with brain disorders or mental illness. They can also be used to locate neurotransmitters.
- fMRI: Functional magnetic resonance imaging measures both structure and function. It measures changes in blood flow to chart the function of the brain. Because it can be used for both structure and function, it can be used to identify lesions, tumors, and so on.

Learning Objective: 2.7 Differentiate structural and functional methods of studying the brain.
Topic: Methods of Studying the Brain
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

170. Describe the location of each of the lobes of the brain. Include in your answer some of the primary functions or anatomical features of each lobe.

Answers will vary but should contain the following for full credit:
The occipital lobes are located at the rearmost part of the skull. They are the primary area for visual processing. The temporal lobes are located in front of the occipital lobes above the ears, and are primarily involved in auditory processing (particularly language). The parietal lobes are located in front of the occipital lobes, but above the temporal lobes. They play a role in the processing and integration of sensory information such as taste, temperature, and touch. The frontal lobes lie behind the forehead. These lobes are important in integrating information and helping with decision making and problem solving. They are also important in movement and contain the motor cortex.

Learning Objective: 2.8 Distinguish important anatomical areas of the brain and their functions.
Topic: The Anatomy of the Brain
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway: 2.2.1 and 2.2.2
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

171. List each of the structures that are a part of the limbic system. List a function for each structure.
Answers will vary but could contain the following:
The limbic system contains structures that are involved in emotionally driven behavior. These structures include the thalamus (primary relay station for the senses), hypothalamus (links the brain with the endocrine system), basal ganglia (essential in motor control, cognition, learning, and emotions), amygdala (important in fear, aggression, and reward) and the hippocampus (important in consolidating information for memory).
Learning Objective: 2.8 Distinguish important anatomical areas of the brain and their functions.
Topic: The Anatomy of the Brain
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway: 2.2.3
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

172. Describe the motor and somatosensory homunculus and explain the importance of studying the mapping of homunculi in the brain.
Answers will vary but should contain the following for full credit:
The homunculus is a distorted body map across the somatosensory and motor cortex. It represents each part of the body sized according to how much space the brain gives to processing information about that body part. Understanding the homunculus helps us understand what parts of the body are prioritized to be more sensitive to touch and pain, are capable of precise and complex movement, and which areas of the body we can expect to be more intricately connected.
Learning Objective: 2.8 Distinguish important anatomical areas of the brain and their functions.
Topic: The Anatomy of the Brain
Difficulty Level: Difficult
Skill Level: Analyze It
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

173. Describe the methods used by researchers to study the role of genetics in behavior. Describe how these methods allow them to draw conclusions about the roles of heredity and environment in human behavior.
Answers will vary but should contain the following for full credit:

A very common method is observing identical twins who are raised in different environments. These studies help researchers look at the contributions of genes and environment in behaviors and personality. Behavioral geneticists also like to conduct adoption studies since the child is raised in an environment by people who have no genetic relationship to the child. In adoption studies, researchers can determine the degree to which an individual's traits resemble those of their biological or adoptive parents.
Learning Objective: 2.12 Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
Topic: Behavioral Genetics and Epigenetics
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

Essay Questions

174. What are the main communicating cells of the nervous system? Describe the parts of the cell and the function of each part.
Answers will vary but should contain the following for full credit:
The main communicating cells of the nervous system are the neurons. They have dendrites that receive information from other cells; the soma, which contains the genetic material for the cell; the axon, which carries the action potential; and the axon terminals, where neurotransmitters are released to communicate with the next cell.
Learning Objective: 2.2 Explain how neurons communicate with one another.
Topic: Communication Between Neurons
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

175. Your friend Blake has been in an accident and has severed his spinal cord at the level of his cervical vertebrae. Based on what you know, what do you predict will be the outcome of Blake's injury?
Answers will vary but should contain the following for full credit:
A spinal injury at the level of the cervical vertebrae would cause paralysis to anything below the area of the damage. Therefore, Blake would be paralyzed from the neck down. He will likely have to be placed on a respirator to keep him breathing. He will be confined to a wheelchair and will most likely require help for all aspects of day-to-day living.
Learning Objective: 2.5 Identify each division of the nervous system.
Topic: The Nervous System: Structure and Function
Difficulty Level: Difficult
Skill Level: Apply What You Know
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

176. Compare and contrast hypothyroidism and hyperthyroidism. In your answer, address the symptoms of both these conditions.
Answers will vary but should contain the following for full credit:
Hyperthyroidism is a condition where the thyroid is overactive. It can produce symptoms of heart palpitations, sweating, diarrhea, increased appetite with weight loss, heat sensitivity, and bulging eyes. Hypothyroidism is an underactive thyroid that can produce symptoms of exhaustion, weight gain, cold tolerance, and a slowed heart rate. Both conditions are abnormalities of the function of the thyroid, and both impact the metabolism of the individual.
Learning Objective: 2.6 Recognize the purpose of the endocrine system and how some hormones influence health and behavior.
Topic: The Endocrine System
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

177. Compare and contrast the characteristics of the two hemispheres of the brain.
Answers will vary but should contain the following for full credit:
For the most part, the left hemisphere specializes in language processing, while the right hemisphere specializes in some aspects of language like rhythm, intonation, accentuation, and vocal emotion. The right hemisphere is also involved in recognizing and interpreting both conscious and unconscious emotions in others. Lastly, the right hemisphere is also important in perceptual tasks, visual-spatial awareness, attention, and audio-spatial perception.
Learning Objective: 2.10 Recognize the functional impairments that occur in a split-brain patient.
Topic: The Divided Brain
Difficulty Level: Moderate
Skill Level: Understand the Concepts
Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

178. Based on your reading of Chapter 2, why is it important to study the brain to understand behavior?
Answers will vary but could include the following:
    - Recognize the brain's role is every thought, feeling, and behavior we experience
    - Ability to help people with brain injuries
    - Understand what areas of the brain may be important in specific behaviors
    - Understand the role of chemicals like neurotransmitters and hormones in human behavior
    - Understand the role of genetics and environment on characteristics and behavior

Learning Objective: Multiple objectives—2.5, 2.6, 2.8, 2.9, 2.12
Topic: Multiple topics
Difficulty Level: Difficult
Skill Level: Analyze It

Adaptive Pathway:
APA LO: 1.1 Describe key concepts, principles, and overarching themes in psychology.

Adaptive Pathway Questions

Adaptive Pathway 2.1: The Action Potential

The following pathway will test your understanding of this topic and adapt to your needs. Be sure to answer all of the questions and watch any of the short videos presented.

MISCONCEPTION #1 = Inability to understand that the resting state of a neuron is negatively charged on the inside relative to the outside.

Pinpoint Question
A neuron at rest maintains a _____ charge due to the presence of a high number of _____ charged ions inside the neuron.

a) negative; positively
b) positive; negatively
c) negative; negatively
Correct. Negatively charged ions inside the neuron's membrane are what give rise to a negative resting potential.
d) positive; positively

Follow-up Question
During the resting potential, the relative electrical charge inside the neuron is _____ compared to the relative _____ electrical charge outside the neuron.

a) negative; positive
Correct. When a neuron is at rest, the inside of the cell is negative relative to the outside of the cell due to the unequal distribution of positively and negatively charged ions.

b) positive; negative
Incorrect. When a neuron is at rest, the inside of the cell is negative relative to the outside of the cell due to the unequal distribution of positively and negatively charged ions. Consider returning to the text where this concept is first discussed and create a note for yourself. Try to rephrase the concept in your own words and even provide an example from your own life, if possible. If you are still having trouble, be sure to talk with your instructor.

c) negative; more negative
Incorrect. When a neuron is at rest, the inside of the cell is negative relative to the outside of the cell due to the unequal distribution of positively and negatively charged ions. Consider returning to the text where this concept is first discussed and create a note for yourself. Try to rephrase the concept in your own words and even provide an example

from your own life, if possible. If you are still having trouble, be sure to talk with your instructor.

d) positive; more positive
Incorrect. When a neuron is at rest, the inside of the cell is negative relative to the outside of the cell due to the unequal distribution of positively and negatively charged ions. Consider returning to the text where this concept is first discussed and create a note for yourself. Try to rephrase the concept in your own words and even provide an example from your own life, if possible. If you are still having trouble, be sure to talk with your instructor.

MISCONCEPTION #2 = Inability to understand the process of an action potential.

Pinpoint Question
An action potential consists of the following stages:

a) stimulation depolarizes the cell by making the inside of the cell more positive → a threshold is reached triggering an action potential → the electrical charge moves down to the end of the axon.
Correct. An action potential occurs when stimulation depolarizes the cell (makes it more positive) enough that it reaches its threshold, which continues to send the electrical charge down the axon to communicate with the next neuron.
b) stimulation depolarizes the cell by making the inside of the cell more negative → a threshold is reached triggering an action potential → the electrical charge moves down to the end of the axon.
c) stimulation depolarizes the cell by making the inside of the cell more positive → a threshold is not reached → the electrical charge stops where it is.
d) stimulation depolarizes the cell by making the inside of the cell more negative → a threshold is not reached → the electrical charge stops where it is.

Follow-up Question
Choose the correct order of the three steps that occur during an action potential:

1. The threshold is not reached.
2. The inside of the cell becomes more negatively charged.
3. The electrical charge stops where it is.
4. The inside of the cell becomes more positively charged.
5. The electrical charge moves down the axon.
6. The threshold is reached.

a) 2 → 1 → 3
Incorrect: An action potential occurs when stimulation depolarizes the cell (makes it more positive) enough that it reaches its threshold, which continues to send the electrical charge down the axon to communicate with the next neuron. Consider returning to the text where this concept is first discussed and create a note for yourself. Try to rephrase the concept in your own words and even provide an example from your own life, if possible. If you are still having trouble, be sure to talk with your instructor.

b) 2 →6 → 5

Incorrect: An action potential occurs when stimulation depolarizes the cell (makes it more positive) enough that it reaches its threshold, which continues to send the electrical charge down the axon to communicate with the next neuron. Consider returning to the text where this concept is first discussed and create a note for yourself. Try to rephrase the concept in your own words and even provide an example from your own life, if possible. If you are still having trouble, be sure to talk with your instructor.

c) 4 → 1 → 3
Incorrect: An action potential occurs when stimulation depolarizes the cell (makes it more positive) enough that it reaches its threshold, which continues to send the electrical charge down the axon to communicate with the next neuron. Consider returning to the text where this concept is first discussed and create a note for yourself. Try to rephrase the concept in your own words and even provide an example from your own life, if possible. If you are still having trouble, be sure to talk with your instructor. .

d) 4 → 6 → 5
Correct: Good job! An action potential occurs when stimulation depolarizes the cell (makes it more positive) enough that it reaches its threshold, which continues to send the electrical charge down the axon to communicate with the next neuron.

MISCONCEPTION #3 = Difficulty understanding the process of neurotransmission.

Pinpoint Question
Action potentials are both electrical and chemical. The chemical part of the action potential takes place when the impulse reaches the _____, and causes the _____ to release the neurotransmitter into the _____.

a) dendrites; soma; cell
b) terminal buttons; dendrites; soma
c) soma; vesicles; synapse
d) terminal buttons; vesicles; synapse
Correct: Right! Once the electrical impulse reaches the terminal buttons of the neuron, it stimulates the vesicles to release the neurotransmitter into the synapse to communicate with the next neuron.

Follow-up Question
Choose the correct order of three of the steps that occur during neurotransmission:

1. The action potential reaches the dendrites of the neuron.
2. The synaptic vesicles burst.
3. The action potential reaches the terminal buttons.
4. The neurotransmitter is released into the synapse.
5. The neurotransmitter is released from the soma.
6. Sodium is released into the synapse.

a) 6 → 1 → 2
Incorrect: Neurotransmission involves the action potential reaching the terminal buttons of the neuron, causing the vesicles to release the neurotransmitter into the synapse. The

communication takes place by the neurotransmitter binding to the receptors on the dendrites of the next neuron. Consider returning to the text where this concept is first discussed and create a note for yourself. Try to rephrase the concept in your own words and even provide an example from your own life, if possible. If you are still having trouble, be sure to talk with your instructor.

b) 3 → 2 → 4
Correct: Good job! Neurotransmission involves the action potential reaching the terminal buttons of the neuron, causing the vesicles to release the neurotransmitter into the synapse. The communication takes place by the neurotransmitter binding to the receptors on the dendrites of the next neuron.

c) 1 → 2 → 6
Incorrect: Neurotransmission involves the action potential reaching the terminal buttons of the neuron, causing the vesicles to release the neurotransmitter into the synapse. The communication takes place by the neurotransmitter binding to the receptors on the dendrites of the next neuron. Consider returning to the text where this concept is first discussed and create a note for yourself. Try to rephrase the concept in your own words and even provide an example from your own life, if possible. If you are still having trouble, be sure to talk with your instructor.

d) 2 → 5 → 3
Incorrect: Neurotransmission involves the action potential reaching the terminal buttons of the neuron, causing the vesicles to release the neurotransmitter into the synapse. The communication takes place by the neurotransmitter binding to the receptors on the dendrites of the next neuron. Consider returning to the text where this concept is first discussed and create a note for yourself. Try to rephrase the concept in your own words and even provide an example from your own life, if possible. If you are still having trouble, be sure to talk with your instructor.

Adaptive Pathway 2.2: Neuroanatomy and Brain Functioning

The following pathway will test your understanding of this topic and adapt to your needs. Be sure to answer all of the questions and watch any of the short videos presented.

MISCONCEPTION #1 = Difficulty recalling the locations and names of the lobes of the cerebral cortex.

Pinpoint Question
Correctly identify each lobe of the brain.
a) A = Occipital lobe; B = Temporal lobe; C = Parietal lobe; D = Frontal lobe
b) A = Frontal lobe; B = Temporal lobe; C = Parietal lobe; D = Occipital lobe

Correct Feedback: Good work! You have correctly identified all four lobes of the cerebral cortex.

c) A = Parietal lobe; B = Occipital lobe; C = Temporal lobe; D = Frontal lobe
d) A = Frontal lobe; B = Parietal lobe; C = Temporal lobe; D = Occipital lobe

Follow-up Question
Correctly identify each lobe of the brain.

a) A = Occipital lobe; B = Temporal lobe; C = Parietal lobe; D = Frontal lobe
Incorrect. The answers are: A = frontal; B = temporal; C = parietal; D = occipital. Consider returning to the text where this concept is first discussed and create a note for yourself. Try to rephrase the concept in your own words and even provide an example from your own life, if possible. If you are still having trouble, be sure to talk with your instructor.

b) A = Frontal lobe; B = Parietal lobe; C = Temporal lobe; D = Occipital lobe
Incorrect. The answers are: A = frontal; B = temporal; C = parietal; D = occipital. Consider returning to the text where this concept is first discussed and create a note for yourself. Try to rephrase the concept in your own words and even provide an example from your own life, if possible. If you are still having trouble, be sure to talk with your instructor.

c) A = Parietal lobe; B = Occipital lobe; C = Temporal lobe; D = Frontal lobe
Incorrect. The answers are: A = frontal; B = temporal; C = parietal; D = occipital. Consider returning to the text where this concept is first discussed and create a note for yourself. Try to rephrase the concept in your own words and even provide an example from your own life, if possible. If you are still having trouble, be sure to talk with your instructor.

d) A = Frontal lobe; B = Temporal lobe; C = Parietal lobe; D = Occipital lobe
Correct: Good work! You've got it.

MISCONCEPTION #2 = Difficulty recalling functions associated with the lobes of the cerebral cortex.

Pinpoint Question
Correctly identify the following functions associated with each lobe of the brain:

1 = Processing bodily sensations (touch, pain)
2 = Processing and interpreting visual information
3 = Processing and interpreting sounds and language
4 = Higher-level thinking (reasoning, planning) and movement

a) 1=C; 2=A; 3=B; 4=D
b) 1=B; 2=D; 3=C; 4=A
c) 1=B; 2=A; 3=C; 4=D
d) 1=C; 2=D; 3=B; 4=A
Correct: You've got it! You have correctly identified the primary functions of all four lobes of the cerebral cortex.

Follow-up Question
Correctly identify the following functions associated with each lobe of the brain:

1 = Processing bodily sensations (touch, pain)
2 = Processing and interpreting visual information
3 = Processing and interpreting sounds and language
4 = Higher-level thinking (reasoning, planning) and movement

a) 1=C; 2=D; 3=B; 4=A
Correct: You've got it! Great work.

b) 1=C; 2=A; 3=B; 4=D
Incorrect: Not quite. It looks like are you still having a little trouble. Keep working at it. Consider returning to the text where this concept is first discussed and create a note for yourself. Try to rephrase the concept in your own words and even provide an example from your own life, if possible. If you are still having trouble, be sure to talk with your instructor.

c) 1=B; 2=A; 3=C; 4=D
Incorrect: Not quite. It looks like are you still having a little trouble. Keep working at it. Consider returning to the text where this concept is first discussed and create a note for yourself. Try to rephrase the concept in your own words and even provide an example from your own life, if possible. If you are still having trouble, be sure to talk with your instructor.

d) 1=B; 2=D; 3=C; 4=A
Incorrect: Not quite. It looks like are you still having a little trouble. Keep working at it. Consider returning to the text where this concept is first discussed and create a note for yourself. Try to rephrase the concept in your own words and even provide an example from your own life, if possible. If you are still having trouble, be sure to talk with your instructor.

MISCONCEPTION #3 = Difficulty distinguishing the functions of each of the structures in the limbic system.

Pinpoint Question
Match the following functions to the appropriate brain structures in the limbic system.

1 = Emotions (fear, anxiety, disgust) and learning
2 = Regulates life-sustaining behaviors (e.g., hunger, thirst, sex)
3 = Sensory relay station
4 = Learning and memory
5 = Voluntary movement and coordination

a) 1=Amygdala; 2=Hypothalamus; 3=Thalamus; 4=Hippocampus; 5=Basal ganglia
Correct: You've got it! You have correctly identified the primary functions of the structures of the limbic system.
b) 1=Hippocampus; 2=Thalamus, 3=Hypothalamus; 4=Basal ganglia; 5=Amygdala

c) 1=Thalamus; 2=Hypothalamus; 3=Amygdala; 4=Hippocampus; 5=Basal ganglia
d) 1=Amygdala; 2=Thalamus; 3=Hypothalamus; 4=Hippocampus; 5=Basal ganglia

Follow-up Question
Match the following functions to the appropriate brain structures in the limbic system.
1 = Emotions (fear, anxiety, disgust) and learning
2 = Regulates life-sustaining behaviors (e.g., hunger, thirst, sex)
3 = Sensory relay station
4 = Learning and memory
5 = Voluntary movement and coordination

a) 1=Thalamus; 2=Hypothalamus; 3=Amygdala; 4=Hippocampus; 5=Basal ganglia
Incorrect: Not quite. These are difficult concepts. Keep working at it. Consider returning to the text where this concept is first discussed and create a note for yourself. Try to rephrase the concept in your own words and even provide an example from your own life, if possible. If you are still having trouble, be sure to talk with your instructor.

b) 1=Amygdala; 2=Thalamus; 3=Hypothalamus; 4=Hippocampus; 5=Basal ganglia
Incorrect: Not quite. These are difficult concepts. Keep working at it. Consider returning to the text where this concept is first discussed and create a note for yourself. Try to rephrase the concept in your own words and even provide an example from your own life, if possible. If you are still having trouble, be sure to talk with your instructor.

c) 1=Hippocampus; 2=Thalamus, 3=Hypothalamus; 4=Basal ganglia; 5=Amygdala
Incorrect: Not quite. These are difficult concepts. Keep working at it. Consider returning to the text where this concept is first discussed and create a note for yourself. Try to rephrase the concept in your own words and even provide an example from your own life, if possible. If you are still having trouble, be sure to talk with your instructor.

d) 1=Amygdala; 2=Hypothalamus; 3=Thalamus; 4=Hippocampus; 5=Basal ganglia
Correct: You've got it! These aren't easy concepts. Good job!

Revel Quiz Questions

The following questions appear at the end of each module and at the end of the chapter in Revel for *Psychology*, 1e.

End of Module Quiz 2.1: The Anatomy and Functioning of Neurons

EOM Q2.1.1
Which part of the neuron improves the speed of the neural impulse?
a) soma
Consider this: It is a fatty substance that provides insulation. LO 2.1: Identify the anatomy and function of a neuron.
b) myelin sheath

c) axon
Consider this: It is a fatty substance that provides insulation. LO 2.1: Identify the anatomy and function of a neuron.
d) dendrite
Consider this: It is a fatty substance that provides insulation. LO 2.1: Identify the anatomy and function of a neuron.
Answer: b
Learning Objective: 2.1: Identify the anatomy and function of a neuron.
Topic: The Anatomy and Functioning of Neurons
Difficulty Level: Easy
Skill Level: Remember the Facts

EOM Q2.1.2
What is the brief electrical impulse that travels down the axon called?
a) refractory period
Consider this: This involves part of the neuron firing, which results in communication with the next neuron. LO 2.2: Explain how neurons communicate with one another.
b) resting potential
Consider this: This involves part of the neuron firing, which results in communication with the next neuron. LO 2.2: Explain how neurons communicate with one another.
c) action potential
d) synaptic transmission
Consider this: This involves part of the neuron firing, which results in communication with the next neuron. LO 2.2: Explain how neurons communicate with one another.
Answer: c
Learning Objective: 2.2: Explain how neurons communicate with one another.
Topic: The Anatomy and Functioning of Neurons
Difficulty Level: Easy
Skill Level: Remember the Facts

EOM Q2.1.3
At its resting state, the outside of a neuron is more _____ than the inside of the neuron.
a) electrically charged
Consider this: The inside of a neuron has fewer sodium ions. LO 2.2: Explain how neurons communicate with one another.
b) chemically charged
Consider this: The inside of a neuron has fewer sodium ions. LO 2.2: Explain how neurons communicate with one another.
c) negatively charged
Consider this: The inside of a neuron has fewer sodium ions. LO 2.2: Explain how neurons communicate with one another.
d) positively charged
Answer: d
Learning Objective: 2.2: Explain how neurons communicate with one another.
Topic: The Anatomy and Functioning of Neurons
Difficulty Level: Difficult

Skill Level: Understand the Concepts

EOM Q2.1.4
An action potential occurs when the inside of a cell becomes more _____ charged and the _____ charge moves down the axon.

a) negatively; electrical
Consider this: An action potential involves sodium ions rushing into the cell. LO 2.2: Explain how neurons communicate with one another.
b) positively; electrical
c) negatively; chemical
Consider this: An action potential involves sodium ions rushing into the cell. LO 2.2: Explain how neurons communicate with one another.
d) positively; chemical
Consider this: An action potential involves sodium ions rushing into the cell. LO 2.2: Explain how neurons communicate with one another.

Answer: b
Learning Objective: 2.2: Explain how neurons communicate with one another.
Topic: The Anatomy and Functioning of Neurons
Difficulty Level: Difficult
Skill Level: Understand the Concepts

EOM Q2.1.5
In the process of neurotransmission, the action potential causes neurotransmitters to be released from the _____ into the _____.

a) soma; synapse
Consider this: There is a small space between neurons for a neurotransmitter to be released. LO 2.2: Explain how neurons communicate with one another.
b) synaptic vesicles; soma
Consider this: There is a small space between neurons for a neurotransmitter to be released. LO 2.2: Explain how neurons communicate with one another.
c) soma; terminal buttons
Consider this: There is a small space between neurons for a neurotransmitter to be released. LO 2.2: Explain how neurons communicate with one another.
d) synaptic vesicles; synapse

Answer: d
Learning Objective: 2.2: Explain how neurons communicate with one another.
Topic: The Anatomy and Functioning of Neurons
Difficulty Level: Difficult
Skill Level: Understand the Concepts

EOM Q2.1.6
Danny has terrible migraines that interfere with his ability to complete his work. He just learned from his psychology class that the migraines could be caused by an overabundance of which neurotransmitter?

a) glutamate
b) dopamine

Consider this: It is an excitatory neurotransmitter that also helps with functions of learning and memory. LO 2.3: Recognize the effects of neurotransmitters on behavior.
c) serotonin
Consider this: It is an excitatory neurotransmitter that also helps with functions of learning and memory. LO 2.3: Recognize the effects of neurotransmitters on behavior.
d) norepinephrine
Consider this: It is an excitatory neurotransmitter that also helps with functions of learning and memory. LO 2.3: Recognize the effects of neurotransmitters on behavior.
Answer: a
Learning Objective: 2.3: Recognize the effects of neurotransmitters on behavior.
Topic: The Anatomy and Functioning of Neurons
Difficulty Level: Moderate
Skill Level: Apply What You Know

End of Module Quiz 2.2: The Nervous System and the Endocrine System

EOM Q2.2.1
A drug like nicotine that produces a biological response in the brain is called a(n) _____.
a) antagonist
Consider this: This is an actual chemical that exerts a response in the brain similar to that of a neurotransmitter. LO 2.3: Recognize the effects of neurotransmitters on behavior.
b) agonist
c) benzodiazepine
Consider this: This is an actual chemical that exerts a response in the brain similar to that of a neurotransmitter. LO 2.3: Recognize the effects of neurotransmitters on behavior.
d) GABA
Consider this: This is an actual chemical that exerts a response in the brain similar to that of a neurotransmitter. LO 2.3: Recognize the effects of neurotransmitters on behavior.
Answer: b
Learning Objective: 2.3: Recognize the effects of neurotransmitters on behavior.
Topic: The Nervous System and the Endocrine System
Difficulty Level: Moderate
Skill Level: Understand the Concepts

EOM Q2.2.2
Tomas has been playing the piano since age 5. Throughout his adolescence, he also taught himself to play guitar, bass, and the drums. Due to his practice with musical instruments, Tomas's brain would show improved _____.
a) neurotransmitter release
Consider this: Creating music involves a variety of senses and cognitive processes. LO 2.4: Distinguish the concepts of synaptic plasticity and neurogenesis.
b) receptor sites
Consider this: Creating music involves a variety of senses and cognitive processes. LO 2.4: Distinguish the concepts of synaptic plasticity and neurogenesis.
c) synaptic plasticity
d) synaptic pruning

Consider this: Creating music involves a variety of senses and cognitive processes. LO 2.4: Distinguish the concepts of synaptic plasticity and neurogenesis.

Answer: c
Learning Objective: 2.4: Distinguish the concepts of synaptic plasticity and neurogenesis.
Topic: The Nervous System and the Endocrine System
Difficulty Level: Difficult
Skill Level: Apply What You Know

EOM Q2.2.3
When you touch a hot stove and immediately withdraw your hand, it is called a(n) _____ and is the result of interneurons within the _____.

a) reflex; brain
Consider this: This is a rapid and automatic action intended to protect us from harm. LO 2.5: Identify each division of the nervous system.
b) reflex; spinal cord
c) descending tract; brain
Consider this: This is a rapid and automatic action intended to protect us from harm. LO 2.5: Identify each division of the nervous system.
d) ascending tract; spinal cord
Consider this: This is a rapid and automatic action intended to protect us from harm. LO 2.5: Identify each division of the nervous system.

Answer: b
Learning Objective: 2.5: Identify each division of the nervous system.
Topic: The Nervous System and the Endocrine System
Difficulty Level: Moderate
Skill Level: Understand the Concepts

EOM Q2.2.4
Clayton incurred a spinal cord injury, and the doctors wanted to enroll him in a clinical trial that used stem cells in the treatment. Stem cells are special because they can _____.

a) act like other cells in the body
Consider this: Stem cells have been used with various diseases/injuries when new cell growth has been needed. LO 2.5: Identify each division of the nervous system.
b) turn into other specialized cells in the body
c) divide more quickly than other cells
Consider this: Stem cells have been used with various diseases/injuries when new cell growth has been needed. LO 2.5: Identify each division of the nervous system.
d) live only in the spinal cord
Consider this: Stem cells have been used with various diseases/injuries when new cell growth has been needed. LO 2.5: Identify each division of the nervous system.

Answer: b
Learning Objective: 2.5: Identify each division of the nervous system.
Topic: The Nervous System and the Endocrine System
Difficulty Level: Moderate
Skill Level: Apply What You Know

EOM Q2.2.5
Chemical substances in the body that regulate bodily activities such as growth, metabolism, and sexual reproduction are called _____.

a) pituitary proteins
Consider this: These are part of the endocrine system and are secreted into your blood stream. LO 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.
b) enzymes
Consider this: These are part of the endocrine system and are secreted into your blood stream. LO 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.
c) neurotransmitters
Consider this: These are part of the endocrine system and are secreted into your blood stream. LO 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.
d) hormones

Answer: d
Learning Objective: 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.
Topic: The Nervous System and the Endocrine System
Difficulty Level: Easy
Skill Level: Remember the Facts

EOM Q2.2.6
The endocrine system consists of many glands that release hormones for different functions. Which gland is considered the master gland that communicates with all the other glands?

a) pituitary gland
b) adrenal gland
Consider this: This gland is located in the brain and works with the hypothalamus. LO 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.
c) thyroid gland
Consider this: This gland is located in the brain and works with the hypothalamus. LO 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.
d) pancreas
Consider this: This gland is located in the brain and works with the hypothalamus. LO 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.

Answer: a
Learning Objective: 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.
Topic: The Nervous System and the Endocrine System
Difficulty Level: Moderate
Skill Level: Remember the Facts

EOM Q2.2.7
Javier has been complaining of being fatigued, cold, and depressed lately. His doctor decides to run some tests on his endocrine system. What condition might the doctor test for given his symptoms?

a) hypothyroidism
b) hyperthyroidism
Consider this: His symptoms suggest this endocrine gland is underactive. LO 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.
c) diabetes
Consider this: His symptoms suggest this endocrine gland is underactive. LO 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.
d) adrenal burnout syndrome
Consider this: His symptoms suggest this endocrine gland is underactive. LO 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.

Answer: a
Learning Objective: 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.
Topic: The Nervous System and the Endocrine System
Difficulty Level: Moderate
Skill Level: Apply What You Know

End of Module Quiz 2.3: The Structure and Function of the Brain

EOM Q2.3.1
A doctor wants detailed pictures of the structures in a patient's brain but doesn't want to expose the patient to any radiation. What would be the best method of assessment for the doctor to use?

a) computed tomography (CT)
Consider this: The machine is a large magnet and takes detailed pictures of organs in the body. LO 2.7: Differentiate structural and functional methods of studying the brain.
b) magnetic resonance imaging (MRI)
c) positron emission tomography (PET)
Consider this: The machine is a large magnet and takes detailed pictures of organs in the body. LO 2.7: Differentiate structural and functional methods of studying the brain.
d) electroencephalogram (EEG)
Consider this: The machine is a large magnet and takes detailed pictures of organs in the body. LO 2.7: Differentiate structural and functional methods of studying the brain.

Answer: b
Learning Objective: 2.7: Differentiate structural and functional methods of studying the brain.
Topic: The Structure and Function of the Brain
Difficulty Level: Moderate
Skill Level: Understand the Concepts

EOM Q2.3.2
Samson is a client in a sleep lab and is going to have his brain wave activity measured while sleeping. He will have electrodes placed all over his skull so that the test can measure his brain activity. This type of test is called _____.

a) positron emission tomography (PET)
Consider this: This is a useful tool in diagnosing sleep disorders, epilepsy, and brain death. LO 2.7: Differentiate structural and functional methods of studying the brain.
b) magnetic resonance imaging (MRI)
Consider this: This is a useful tool in diagnosing sleep disorders, epilepsy, and brain death. LO 2.7: Differentiate structural and functional methods of studying the brain.
c) electroencephalogram (EEG)
d) magnetoencephalography (MEG)
Consider this: This is a useful tool in diagnosing sleep disorders, epilepsy, and brain death. LO 2.7: Differentiate structural and functional methods of studying the brain.

Answer: c
Learning Objective: 2.7: Differentiate structural and functional methods of studying the brain.
Topic: The Structure and Function of the Brain
Difficulty Level: Moderate
Skill Level: Apply What You Know

EOM Q2.3.3
What part of the brain allows us to detect danger even below the level of conscious awareness?

a) amygdala
b) hippocampus
Consider this: It is from the Greek word for almond, which describes its shape. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
c) basal ganglia
Consider this: It is from the Greek word for almond, which describes its shape. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
d) reticular formation
Consider this: It is from the Greek word for almond, which describes its shape. LO 2.8: Distinguish important anatomical areas of the brain and their functions.

Answer: a
Learning Objective: 2.8: Distinguish important anatomical areas of the brain and their functions.
Topic: The Structure and Function of the Brain
Difficulty Level: Moderate
Skill Level: Understand the Concepts

EOM Q2.3.4
The cerebral cortex is divided into _____ lobes with the _____ lobe at the back of the head.

a) three; occipital
Consider this: Visual information is processed by the lobe at the back of the head. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
b) four; parietal

Consider this: Visual information is processed by the lobe at the back of the head. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
c) three; parietal
Consider this: Visual information is processed by the lobe at the back of the head. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
d) four; occipital

Answer: d
Learning Objective: 2.8: Distinguish important anatomical areas of the brain and their functions.
Topic: The Structure and Function of the Brain
Difficulty Level: Difficult
Skill Level: Remember the Facts

EOM Q2.3.5
Sophie has entered her first spelling bee. In addition to studying from a long list of words, she spends time planning how to psyche out her competitors on the big day. Which lobe of her brain would she primarily be using during these activities?

a) frontal
b) temporal
Consider this: This lobe is the largest and most evolved lobe of the brain. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
c) academic
Consider this: This lobe is the largest and most evolved lobe of the brain. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
d) parietal
Consider this: This lobe is the largest and most evolved lobe of the brain. LO 2.8: Distinguish important anatomical areas of the brain and their functions.

Answer: a
Learning Objective: 2.8: Distinguish important anatomical areas of the brain and their functions.
Topic: The Structure and Function of the Brain
Difficulty Level: Difficult
Skill Level: Apply What You Know

EOM Q2.3.6
Which structure in the limbic system is responsible for voluntary movement and coordination?

a) hippocampus
Consider this: This area of the brain comprises three smaller, interconnected structures. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
b) thalamus
Consider this: This area of the brain comprises three smaller, interconnected structures. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
c) hypothalamus
Consider this: This area of the brain comprises three smaller, interconnected structures. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
d) basal ganglia

Answer: d
Learning Objective: 2.8: Distinguish important anatomical areas of the brain and their functions.

Topic: The Structure and Function of the Brain
Difficulty Level: Difficult
Skill Level: Remember the Facts

End of Module Quiz 2.4: Concepts in Neuropsychology

EOM Q2.4.1
Andre suffered brain damage from an accident at work. Since his accident, he seems to be unaware of his own body parts and at times unable to feel pain. Which lobe of his brain is likely to have incurred damage?

a) frontal
Consider this: This lobe has specialized areas that correspond to feeling touch on specific areas of our body. LO 2.9: Analyze how damage to the brain affects behavior.
b) parietal
c) temporal
Consider this: This lobe has specialized areas that correspond to feeling touch on specific areas of our body. LO 2.9: Analyze how damage to the brain affects behavior.
d) somatosensory
Consider this: This lobe has specialized areas that correspond to feeling touch on specific areas of our body. LO 2.9: Analyze how damage to the brain affects behavior.

Answer: b
Learning Objective: 2.9: Analyze how damage to the brain affects behavior.
Topic: Concepts in Neuropsychology
Difficulty Level: Moderate
Skill Level: Apply What You Know

EOM Q2.4.2
Yuna loves to play soccer and is an aggressive player who will head the ball as often as she can. Her parents have noticed that she has been forgetting to turn in assignments and forgetting when she is supposed to hang out with friends. They are concerned because _____.

a) she might be doing drugs
Consider this: The findings were unique because the results were not related to the number of concussions. LO 2.9: Analyze how damage to the brain affects behavior.
b) recent research has suggested that teenagers are very forgetful
Consider this: The findings were unique because the results were not related to the number of concussions. LO 2.9: Analyze how damage to the brain affects behavior.
c) recent research has suggested that heading the ball can lead to memory problems
d) recent research has suggested that specializing in only one sport can lead to cognitive impairment
Consider this: The findings were unique because the results were not related to the number of concussions. LO 2.9: Analyze how damage to the brain affects behavior.

Answer: c
Learning Objective: 2.9: Analyze how damage to the brain affects behavior.
Topic: Concepts in Neuropsychology
Difficulty Level: Moderate
Skill Level: Apply What You Know

EOM Q2.4.3
What is the name for the band of axons that connects the right hemisphere of the brain to the left hemisphere?

a) amygdala
Consider this: This structure acts as a bridge that enables the right and left hemispheres to talk to each other. LO 2.10: Recognize the functional impairments that occur in a split brain patient.
b) thalamus
Consider this: This structure acts as a bridge that enables the right and left hemispheres to talk to each other. LO 2.10: Recognize the functional impairments that occur in a split brain patient.
c) contralateral
Consider this: This structure acts as a bridge that enables the right and left hemispheres to talk to each other. LO 2.10: Recognize the functional impairments that occur in a split brain patient.
d) corpus callosum

Answer: d
Learning Objective: 2.10: Recognize the functional impairments that occur in a split brain patient.
Topic: Concepts in Neuropsychology
Difficulty Level: Easy
Skill Level: Remember the Facts

EOM Q2.4.4
For most people, language is processed in which hemisphere of the brain?

a) left
b) right
Consider this: For 95 percent of right-handed people, language is dominant in this hemisphere. LO 2.10: Recognize the functional impairments that occur in a split brain patient.
c) split equally between the right and left sides of the brain
Consider this: For 95 percent of right-handed people, language is dominant in this hemisphere. LO 2.10: Recognize the functional impairments that occur in a split brain patient.
d) Language is handled in the prefrontal cortex.
Consider this: For 95 percent of right-handed people, language is dominant in this hemisphere. LO 2.10: Recognize the functional impairments that occur in a split brain patient.

Answer: a
Learning Objective: 2.10: Recognize the functional impairments that occur in a split brain patient.
Topic: Concepts in Neuropsychology
Difficulty Level: Difficult
Skill Level: Understand the Concepts

End of Module Quiz 2.5: Behavioral Genetics

EOM Q2.5.1
Jaselyn has a pair of heterozygous genes for a "widow's peak" hairline. What kind of hairline will she inherit?

a) a widow's peak hairline
b) no widow's peak hairline
Consider this: Heterozygous refers to the situation where one allele is dominant and the other is recessive. LO 2.11: Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
c) One side of her hairline will follow a widow's peak shape and the other won't.
Consider this: Heterozygous refers to the situation where one allele is dominant and the other is recessive. LO 2.11: Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
d) This information doesn't tell us anything about the kind of hairline she will have when she is older.
Consider this: Heterozygous refers to the situation where one allele is dominant and the other is recessive. LO 2.11: Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.

Answer: a
Learning Objective: 2.11: Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
Topic: Behavioral Genetics
Difficulty Level: Difficult
Skill Level: Apply What You Know

EOM Q2.5.2
The complete set of instructions for our physical and psychological characteristics is called our _____.

a) phenotype
Consider this: We have trillions of cells in our body, but only one of these and it is 99 percent the same. LO 2.11: Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
b) recessive genes
Consider this: We have trillions of cells in our body, but only one of these and it is 99 percent the same. LO 2.11: Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
c) genome
d) DNA
Consider this: We have trillions of cells in our body, but only one of these and it is 99 percent the same. LO 2.11: Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.

Answer: c
Learning Objective: 2.11: Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
Topic: Behavioral Genetics

Difficulty Level: Moderate
Skill Level: Remember the Facts

EOM Q2.5.3
A person's genetic makeup is referred to as _____, whereas the observable traits that are expressed from genes is referred to as _____.

a) DNA; heritability
Consider this: Some traits can be influenced by environmental conditions. LO 2.12: Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
b) heritability; genotype
Consider this: Some traits can be influenced by environmental conditions. LO 2.12: Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
c) phenotype; genotype
Consider this: Some traits can be influenced by environmental conditions. LO 2.12: Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
d) genotype; phenotype

Answer: d
Learning Objective: 2.12: Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
Topic: Behavioral Genetics
Difficulty Level: Moderate
Skill Level: Remember the Facts

EOM Q2.5.4
Twin sisters Leah and Lily know they have the genetics for heart disease. Both sisters like to exercise, but Lily also has a high-stress job and only sleeps four hours a night. Leah is a yoga instructor and eats a mostly vegetarian diet. The field of epigenetics would suggest _____.

a) the stress in Lily's life will increase her cortisol levels and therefore decrease her chance of heart disease
Consider this: Epigenetics studies the conditions in an individual's life that can exert an effect on genes. LO 2.12: Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
b) the environment has the ability to change gene expression, so both women can change their risk of developing heart disease
c) Leah will not get heart disease because she eats healthy and practices yoga
Consider this: Epigenetics studies the conditions in an individual's life that can exert an effect on genes. LO 2.12: Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
d) the genetic predisposition will outweigh any lifestyle change, so they are both likely to develop heart disease
Consider this: Epigenetics studies the conditions in an individual's life that can exert an effect on genes. LO 2.12: Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.

Answer: b
Learning Objective: 2.12: Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
Topic: Behavioral Genetics
Difficulty Level: Difficult
Skill Level: Apply What You Know

EOM Q2.5.5
Grady was adopted shortly after birth into a loving home. Neither of his adopted parents drank alcohol or did any drugs. Throughout his adolescence and into adulthood, Grady struggled with substance abuse. He eventually found out that his biological mother was an alcoholic for her entire life. What does this scenario suggest?

a) There is likely a strong genetic explanation for Grady's substance abuse.
b) There is likely a strong environmental explanation for Grady's substance abuse.
Consider this: Adoption studies help clarify the role of genetics and environment in explaining personality and behavior. LO 2.12: Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
c) Both genetics and environment have equally contributed to Grady's substance abuse.
Consider this: Adoption studies help clarify the role of genetics and environment in explaining personality and behavior. LO 2.12: Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
d) Adoption is a significant environmental stressor and increases the probability a person will develop a substance use disorder.
Consider this: Adoption studies help clarify the role of genetics and environment in explaining personality and behavior. LO 2.12: Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.

Answer: a
Learning Objective: 2.12: Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
Topic: Behavioral Genetics
Difficulty Level: Moderate
Skill Level: Apply What You Know

End of Module Quiz 2.6: Piecing It Together: Deep Brain Stimulation

EOM Q2.6.1
The use of a neurostimulator to send electrical signals to electrodes implanted in the brain to help with physical and psychological disorders is called _____.

a) deep brain stimulation
b) electric shock therapy
Consider this: This procedure does not create any permanent changes to the brain. LO 2.13: Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
c) deep vagus nerve stimulation
Consider this: This procedure does not create any permanent changes to the brain. LO 2.13: Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.

d) transcranial magnetic stimulation
Consider this: This procedure does not create any permanent changes to the brain. LO 2.13: Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.

Answer: a
Learning Objective: 2.13: Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
Topic: Piecing It Together: Deep Brain Stimulation
Difficulty Level: Moderate
Skill Level: Understand the Concepts

EOM Q2.6.2
Research examining gender differences in the development and treatment of Parkinson's disease indicates that _____ are more likely to develop the disease and _____ are more likely to receive deep brain stimulation (DBS) as a treatment option for the condition.

a) men; women
Consider this: Women appear to spend more time considering treatment options before deciding on a plan. LO 2.13: Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
b) men; men
c)women; men
Consider this: Women appear to spend more time considering treatment options before deciding on a plan. LO 2.13: Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
d)women; women
Consider this: Women appear to spend more time considering treatment options before deciding on a plan. LO 2.13: Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.

Answer: b
Learning Objective: 2.13: Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
Topic: Piecing It Together: Deep Brain Stimulation
Difficulty Level: Moderate
Skill Level: Understand the Concepts

EOM Q2.6.3
In addition to Parkinson's disease, deep brain stimulation (DBS) has also been approved for the treatment of _____.

a) depression
Consider this: DBS is not currently FDA approved to treat severe depression but several research studies have suggested that it may be very effective. LO 2.13: Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.

b) obsessive compulsive disorder
c) schizophrenia
Consider this: DBS is not currently FDA approved to treat severe depression but several research studies have suggested that it may be very effective. LO 2.13: Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
d) substance use disorders
Consider this: DBS is not currently FDA approved to treat severe depression but several research studies have suggested that it may be very effective. LO 2.13: Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.

Answer: b
Learning Objective: 2.13: Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
Topic: Piecing It Together: Deep Brain Stimulation
Difficulty Level: Moderate
Skill Level: Remember the Facts

EOM Q2.6.4
Cultural factors have been shown to play a role in determining who receives deep brain stimulation (DBS). Who is the most likely to receive DBS as treatment for Parkinson's disease?

a) White female
Consider this: Various demographic and racial barriers exist to receiving this, and other medical treatments. LO 2.13: Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
b) Hispanic female
Consider this: Various demographic and racial barriers exist to receiving this, and other medical treatments. LO 2.13: Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
c) Black male
Consider this: Various demographic and racial barriers exist to receiving this, and other medical treatments. LO 2.13: Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
d) White male

Answer: d
Learning Objective: 2.13: Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
Topic: Piecing It Together: Deep Brain Stimulation
Difficulty Level: Moderate
Skill Level: Remember the Facts

EOM Q2.6.5

Most research studies conducted on the efficacy of deep brain stimulation (DBS) have been conducted with a small number of participants. Researchers follow the participant's symptoms over time and note whether the symptoms are better or worse when using DBS. This type of research design is called a(n) _____.

a) experiment
Consider this: Not all research studies have to include a large number of participants. Well-designed research can provide important information even when it only involves a small sample. LO 2.13: Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
b) correlation
Consider this: Not all research studies have to include a large number of participants. Well-designed research can provide important information even when it only involves a small sample. LO 2.13: Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
c) pilot study
Consider this: Not all research studies have to include a large number of participants. Well-designed research can provide important information even when it only involves a small sample. LO 2.13: Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
d) case study

Answer: d
Learning Objective: 2.13: Analyze how the cross-cutting themes of psychology apply to the use of deep brain stimulation in the treatment of medical and psychological disorders.
Topic: Piecing It Together: Deep Brain Stimulation
Difficulty Level: Moderate
Skill Level: Apply What You Know

End of Chapter Quiz: Neuroscience and the Biology of Behavior

EOC Q2.1
The cell body that contains the nucleus, which includes DNA and other structures that support the neuron, is called the _____.

a) soma
b) axon
Consider this: The dendrites emerge from this to receive signals from other neurons. LO 2.1: Identify the anatomy and function of a neuron.
c) dendrites
Consider this: The dendrites emerge from this to receive signals from other neurons. LO 2.1: Identify the anatomy and function of a neuron.
d) terminal buttons
Consider this: The dendrites emerge from this to receive signals from other neurons. LO 2.1: Identify the anatomy and function of a neuron.

Answer: a
Learning Objective: 2.1: Identify the anatomy and function of a neuron.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Easy
Skill Level: Remember the Facts

EOC Q2.2
The structures that extend out from the axon and release chemicals into the space between neurons are called _____.

a) dendrites
Consider this: They contain chemical messengers called neurotransmitters. LO 2.1: Identify the anatomy and function of a neuron.
b) terminal buttons
c) myelin sheath
Consider this: They contain chemical messengers called neurotransmitters. LO 2.1: Identify the anatomy and function of a neuron.
d) soma
Consider this: They contain chemical messengers called neurotransmitters. LO 2.1: Identify the anatomy and function of a neuron.

Answer: b
Learning Objective: 2.1: Identify the anatomy and function of a neuron.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Easy
Skill Level: Remember the Facts

EOC Q2.3
The neuron that secretes neurotransmitter into the synapse is called the _____, and the neuron that receives the signal is called the _____.

a) preneurotransmitter; postneurotransmitter

Consider this: Neurons are not actually connected to one another. One neuron communicates with the next through an electrical and chemical process. LO 2.2: Explain how neurons communicate with one another.
b) postsynaptic neuron; presynaptic neuron
Consider this: Neurons are not actually connected to one another. One neuron communicates with the next through an electrical and chemical process. LO 2.2: Explain how neurons communicate with one another.
c) presynaptic neuron; postsynaptic neuron
d) postneurotransmitter; preneurotransmitter
Consider this: Neurons are not actually connected to one another. One neuron communicates with the next through an electrical and chemical process. LO 2.2: Explain how neurons communicate with one another.
Answer: c
Learning Objective: 2.2: Explain how neurons communicate with one another.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Moderate
Skill Level: Understand the Concepts

EOC Q2.4
At its resting state, the inside of a neuron is more _____ than the outside.
a) positively charged
Consider this: There is a different charge inside the neuron compared to outside the neuron, which prepares the neuron to fire. LO 2.2: Explain how neurons communicate with one another.
b) negatively charged
c) electrically charged
Consider this: There is a different charge inside the neuron compared to outside the neuron, which prepares the neuron to fire. LO 2.2: Explain how neurons communicate with one another.
d) chemically charged
Consider this: There is a different charge inside the neuron compared to outside the neuron, which prepares the neuron to fire. LO 2.2: Explain how neurons communicate with one another.
Answer: b
Learning Objective: 2.2: Explain how neurons communicate with one another.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Difficult
Skill Level: Understand the Concepts

EOC Q2.5
An action potential occurs when the inside of the cell becomes _____ and reaches its threshold, which causes a(n) _____ reaction.
a) depolarized; electrical
b) depolarized; chemical
Consider this: The inside of a neuron becomes more positive before an action potential occurs. LO 2.2: Explain how neurons communicate with one another.

c) hyperpolarized; electrical
Consider this: The inside of a neuron becomes more positive before an action potential occurs. LO 2.2: Explain how neurons communicate with one another.
d) hyperpolarized; chemical
Consider this: The inside of a neuron becomes more positive before an action potential occurs. LO 2.2: Explain how neurons communicate with one another.
Answer: a
Learning Objective: 2.2: Explain how neurons communicate with one another.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Difficult
Skill Level: Understand the Concepts

EOC Q2.6
An action potential becomes a(n) _____ event once the _____ is/are released into the synapse.
a) electrical; enzymes
Consider this: Neurons don't touch each other but are still able to communicate. LO 2.2: Explain how neurons communicate with one another.
b) electrical; neurotransmitter
Consider this: Neurons don't touch each other but are still able to communicate. LO 2.2: Explain how neurons communicate with one another.
c) chemical; neurotransmitter
d) chemical; enzymes
Consider this: Neurons don't touch each other but are still able to communicate. LO 2.2: Explain how neurons communicate with one another.
Answer: c
Learning Objective: 2.2: Explain how neurons communicate with one another.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Difficult
Skill Level: Understand the Concepts

EOC Q2.7
Muhammad Ali had trouble controlling his motor movements in the last decades of his life. He had tremors in his muscles, which made it difficult for him to walk and talk. He was diagnosed with Parkinson's disease, which means he had low levels of which neurotransmitter?
a) acetylcholine
Consider this: High levels of this neurotransmitter may cause symptoms of schizophrenia. LO 2.3: Recognize the effects of neurotransmitters on behavior.
b) dopamine
c) serotonin
Consider this: High levels of this neurotransmitter may cause symptoms of schizophrenia. LO 2.3: Recognize the effects of neurotransmitters on behavior.
d) norepinephrine
Consider this: High levels of this neurotransmitter may cause symptoms of schizophrenia. LO 2.3: Recognize the effects of neurotransmitters on behavior.
Answer: b

Learning Objective: 2.3: Recognize the effects of neurotransmitters on behavior.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Easy
Skill Level: Remember the Facts

EOC Q2.8
An antagonist can be described as a _____.
a) chemical that increases the effect of a substance already in the body
Consider this: Naltrexone is a drug that can be given to someone who overdoses on heroin. LO 2.3: Recognize the effects of neurotransmitters on behavior.
b) neurotransmitter that irritates the nervous system
Consider this: Naltrexone is a drug that can be given to someone who overdoses on heroin. LO 2.3: Recognize the effects of neurotransmitters on behavior.
c) chemical that increases the likelihood of another action potential to occur
Consider this: Naltrexone is a drug that can be given to someone who overdoses on heroin. LO 2.3: Recognize the effects of neurotransmitters on behavior.
d) chemical that blocks the effects of a substance or neurotransmitter
Answer: d
Learning Objective: 2.3: Recognize the effects of neurotransmitters on behavior.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Moderate
Skill Level: Remember the Facts

EOC Q2.9
A study with London taxi cab drivers found that the hippocampus of their brains had greater volume, which was presumed to mean more neural connections, as a result of learning and driving new routes around the city. This finding demonstrates the concept of _____.
a) neurotransmission
Consider this: Learning can promote neurons to grow and develop more connections. LO 2.4: Distinguish the concepts of synaptic plasticity and neurogenesis.
b) synaptic plasticity
c) downregulation
Consider this: Learning can promote neurons to grow and develop more connections. LO 2.4: Distinguish the concepts of synaptic plasticity and neurogenesis.
d) synaptic generativity
Consider this: Learning can promote neurons to grow and develop more connections. LO 2.4: Distinguish the concepts of synaptic plasticity and neurogenesis.
Answer: b
Learning Objective: 2.4: Distinguish the concepts of synaptic plasticity and neurogenesis.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Moderate
Skill Level: Understand the Concepts

EOC Q2.10

Chen has felt depressed for the last six months and is on an antidepressant. He still struggles with depressed mood and difficulty with his memory. His psychologist suggested getting more _____ because that may increase the volume of the _____ in his brain.

a) vitamin D; blood
Consider this: There is evidence that environmental interventions can support and increase the amount of neurogenesis that occurs in the brain. LO 2.4: Distinguish the concepts of synaptic plasticity and neurogenesis.
b) protein; neurotransmitters
Consider this: There is evidence that environmental interventions can support and increase the amount of neurogenesis that occurs in the brain. LO 2.4: Distinguish the concepts of synaptic plasticity and neurogenesis.
c) rest; hippocampus
Consider this: There is evidence that environmental interventions can support and increase the amount of neurogenesis that occurs in the brain. LO 2.4: Distinguish the concepts of synaptic plasticity and neurogenesis.
d) exercise; hippocampus

Answer: d
Learning Objective: 2.4: Distinguish the concepts of synaptic plasticity and neurogenesis.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Difficult
Skill Level: Apply What You Know

EOC Q2.11
Sensory neurons carry information _____ the central nervous system, and motor neurons carry information _____ the central nervous system.

a) within; outside
Consider this: Interneurons reside exclusively within the central nervous system. LO 2.5: Identify each division of the nervous system.
b) outside; within
Consider this: Interneurons reside exclusively within the central nervous system. LO 2.5: Identify each division of the nervous system.
c) away from; toward
Consider this: Interneurons reside exclusively within the central nervous system. LO 2.5: Identify each division of the nervous system.
d) toward; away from

Answer: d
Learning Objective: 2.5: Identify each division of the nervous system.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Moderate
Skill Level: Understand the Concepts

EOC Q2.12
As Makelah does squats and lunges to warm her body up to play basketball, she realizes she is using which part of her peripheral nervous system?

a) parasympathetic nervous system
Consider this: This part of the nervous system coordinates our movements and performs tasks that we consciously control. LO 2.5: Identify each division of the nervous system.

b) somatic nervous system
c) autonomic nervous system
Consider this: This part of the nervous system coordinates our movements and performs tasks that we consciously control. LO 2.5: Identify each division of the nervous system.
d) sympathetic nervous system
Consider this: This part of the nervous system coordinates our movements and performs tasks that we consciously control. LO 2.5: Identify each division of the nervous system.
Answer: b
Learning Objective: 2.5: Identify each division of the nervous system.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Moderate
Skill Level: Apply What You Know

EOC Q2.13
Brad is a 45-year-old man who was in a car accident and injured his lower spine area. As a result of the damage, he has lost feeling and movement in what parts of his body?
a) arms and legs
Consider this: A person who suffers a spinal cord injury may lose some or all functions in the body controlled by the area of the spine below the injury. LO 2.5: Identify each division of the nervous system.
b) chest and lungs
Consider this: A person who suffers a spinal cord injury may lose some or all functions in the body controlled by the area of the spine below the injury. LO 2.5: Identify each division of the nervous system.
c) hips and legs
d) chest and hips
Consider this: A person who suffers a spinal cord injury may lose some or all functions in the body controlled by the area of the spine below the injury. LO 2.5: Identify each division of the nervous system.
Answer: c
Learning Objective: 2.5: Identify each division of the nervous system.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Moderate
Skill Level: Apply What You Know

EOC Q2.14
Which structure is considered part of the endocrine system and the nervous system?
a) adrenal glands
Consider this: This structure regulates hormone release by communicating with the master gland. LO 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.
b) thalamus
Consider this: This structure regulates hormone release by communicating with the master gland. LO 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.
c) pituitary gland

Consider this: This structure regulates hormone release by communicating with the master gland. LO 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.

d) hypothalamus

Answer: d
Learning Objective: 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Moderate
Skill Level: Remember the Facts

EOC Q2.15
Sayla has had to monitor her blood sugar levels since she was a child to make sure she doesn't get sick. Although she would like to be able to eat sweets, she understands she can't because her _____ does not produce enough _____.

a) pancreas; insulin

b) adrenal glands; cortisol

Consider this: This is a condition called diabetes. LO 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.

c) adrenal glands; insulin

Consider this: This is a condition called diabetes. LO 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.

d) pancreas; sugar

Consider this: This is a condition called diabetes. LO 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.

Answer: a
Learning Objective: 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Moderate
Skill Level: Understand the Concepts

EOC Q2.16
Epinephrine and norepinephrine are secreted by the adrenal glands and are both _____ when used in the nervous system and _____ when used in the endocrine system.

a) neurotransmitters; hormones

b) hormones; neurotransmitters

Consider this: In the nervous system, these are fast-acting, whereas in the endocrine system, they are slower. LO 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.

c) stress regulators; calming agents

Consider this: In the nervous system, these are fast-acting, whereas in the endocrine system, they are slower. LO 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.

d) calming agents; stress regulators

Consider this: In the nervous system, these are fast-acting, whereas in the endocrine system, they are slower. LO 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.

Answer: a
Learning Objective: 2.6: Recognize the purpose of the endocrine system and how some hormones affect health and behavior.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Moderate
Skill Level: Understand the Concepts

EOC Q2.17
Keisha was brought to the ER with a bump on her head. The doctor ordered a test that consists of a series of x-rays from many different perspectives that will display a two-dimensional image of her brain. This test is called _____.

a) positron emission tomography (PET)
Consider this: This test is a popular choice in the ER because it takes fewer than 5 minutes and tends to be less expensive. LO 2.7: Differentiate structural and functional methods of studying the brain.
b) computed tomography (CT)
c) magnetic resonance imaging (MRI)
Consider this: This test is a popular choice in the ER because it takes fewer than 5 minutes and tends to be less expensive. LO 2.7: Differentiate structural and functional methods of studying the brain.
d) magnetoencephalography (MEG)
Consider this: This test is a popular choice in the ER because it takes fewer than 5 minutes and tends to be less expensive. LO 2.7: Differentiate structural and functional methods of studying the brain.

Answer: b
Learning Objective: 2.7: Differentiate structural and functional methods of studying the brain.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Moderate
Skill Level: Apply What You Know

EOC Q2.18
Which type of brain scan provides a functional assessment of the brain?

a) positron emission tomography (PET)
b) cranial ultrasound
Consider this: This scan measures glucose radioactivity, which is used as an indicator of brain activity. LO 2.7: Differentiate structural and functional methods of studying the brain.
c) computed tomography (CT)
Consider this: This scan measures glucose radioactivity, which is used as an indicator of brain activity. LO 2.7: Differentiate structural and functional methods of studying the brain.
d) magnetoencephalography (MEG)

Consider this: This scan measures glucose radioactivity, which is used as an indicator of brain activity. LO 2.7: Differentiate structural and functional methods of studying the brain.

Answer: a
Learning Objective: 2.7: Differentiate structural and functional methods of studying the brain.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Moderate
Skill Level: Understand the Concepts

EOC Q2.19
Brett was up to bat and the pitcher threw a wild pitch, hitting Brett in the back of the head. Luckily, Brett's batting helmet covered his neck, protecting his _____, which controls breathing and heartbeat.

a) midbrain
Consider this: This is the place where the brain and spinal cord meet. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
b) cerebellum
Consider this: This is the place where the brain and spinal cord meet. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
c) pons
Consider this: This is the place where the brain and spinal cord meet. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
d) medulla

Answer: d
Learning Objective: 2.8: Distinguish important anatomical areas of the brain and their functions.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Moderate
Skill Level: Apply What You Know

EOC Q2.20
Which lobe of the brain touches all other lobes in the brain?

a) frontal
Consider this: This lobe contains the somatosensory cortex. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
b) parietal
c) occipital
Consider this: This lobe contains the somatosensory cortex. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
b) no lobe touches all other lobes
Consider this: This lobe contains the somatosensory cortex. LO 2.8: Distinguish important anatomical areas of the brain and their functions.

Answer: b
Learning Objective: 2.8: Distinguish important anatomical areas of the brain and their functions.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Difficult

Skill Level: Remember the Facts

EOC Q2.21
We hear with our ears, but which lobe of our brain is used to understand language?
a) temporal lobe
b) parietal lobe
Consider this: This area is located close to the ears. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
c) frontal lobe
Consider this: This area is located close to the ears. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
d) occipital lobe
Consider this: This area is located close to the ears. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
Answer: a
Learning Objective: 2.8: Distinguish important anatomical areas of the brain and their functions.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Difficult
Skill Level: Understand the Concepts

EOC Q2.22
Which structure of the limbic system is considered the center of our emotions?
a) hippocampus
Consider this: This area of the brain can unconsciously process potentially threatening information. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
b) amygdala
c) hypothalamus
Consider this: This area of the brain can unconsciously process potentially threatening information. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
d) thalamus
Consider this: This area of the brain can unconsciously process potentially threatening information. LO 2.8: Distinguish important anatomical areas of the brain and their functions.
Answer: b
Learning Objective: 2.8: Distinguish important anatomical areas of the brain and their functions.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Difficult
Skill Level: Understand the Concepts

EOC Q2.23
Manny is a 15-year-old boy who has been begging his parents to let him try out for his high school football team. Manny's parents are concerned about the risk of a _____ if he plays football.
a) broken leg

Consider this: Research points to an increased risk in this injury for football and cycling. LO 2.9: Analyze how damage to the brain affects behavior.
b) concussion
c) coma
Consider this: Research points to an increased risk in this injury for football and cycling. LO 2.9: Analyze how damage to the brain affects behavior.
d) decrease in his grades
Consider this: Research points to an increased risk in this injury for football and cycling. LO 2.9: Analyze how damage to the brain affects behavior.
Answer: b
Learning Objective: 2.9: Analyze how damage to the brain affects behavior.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Easy
Skill Level: Apply What You Know

EOC Q2.24
Phineas Gage became a famous case study demonstrating how damage to the _____ can lead to significant personality changes.
a) prefrontal cortex
b) parietal lobe
Consider this: This area of the brain is responsible for what is known as "executive function." LO 2.9: Analyze how damage to the brain affects behavior.
c) somatosensory cortex
Consider this: This area of the brain is responsible for what is known as "executive function." LO 2.9: Analyze how damage to the brain affects behavior.
d) temporal lobe
Consider this: This area of the brain is responsible for what is known as "executive function." LO 2.9: Analyze how damage to the brain affects behavior.
Answer: a
Learning Objective: 2.9: Analyze how damage to the brain affects behavior.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Moderate
Skill Level: Apply What You Know

EOC Q2.25
Rayna considers herself to be a creative person. She creates sculptures out of recycled materials and loves to paint. She also seems to be skilled at reading people's emotional expressions. Which hemisphere of Rayna's brain would be the most active in these situations?
a) predominantly the left hemisphere and some of the right hemisphere
Consider this: Nonverbal abilities are lateralized primarily in this side of the brain. LO 2.10: Recognize the functional impairments that occur in a split brain patient.
b) a combination of both the left and the right hemispheres
Consider this: Nonverbal abilities are lateralized primarily in this side of the brain. LO 2.10: Recognize the functional impairments that occur in a split brain patient.
c) left hemisphere

Consider this: Nonverbal abilities are lateralized primarily in this side of the brain. LO 2.10: Recognize the functional impairments that occur in a split brain patient.
d) right hemisphere
Answer: d
Learning Objective: 2.10: Recognize the functional impairments that occur in a split brain patient.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Moderate
Skill Level: Apply What You Know

EOC Q2.26
Ava has had her corpus callosum severed and is referred to as a "split brain patient." When her doctor presents an apple in her left visual field she claims she doesn't see anything. Why is this?
a) The left visual field is processed by both sides of the brain, but because her corpus callosum has been cut, the hemispheres of her brain can't talk to each other.
Consider this: This is an example of split brain research and demonstrates the specialization of the hemispheres. LO 2.10: Recognize the functional impairments that occur in a split brain patient.
b) The severing of the corpus callosum decreases language ability.
Consider this: This is an example of split brain research and demonstrates the specialization of the hemispheres. LO 2.10: Recognize the functional impairments that occur in a split brain patient.
c) The left visual field is processed by the right side of the brain, which is not associated with language.
d) The left visual field is processed by the left side of the brain, which is not associated with language.
Consider this: This is an example of split brain research and demonstrates the specialization of the hemispheres. LO 2.10: Recognize the functional impairments that occur in a split brain patient.
Answer: c
Learning Objective: 2.10: Recognize the functional impairments that occur in a split brain patient.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Difficult
Skill Level: Apply What You Know

EOC Q2.27
Ricky has blue eyes. Both of his parents have brown eyes. How is this possible?
a) Homozygous alleles were inherited from his grandparents.
Consider this: Humans can carry genes that are not expressed in observable traits but can be passed on to their offspring. LO 2.11: Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
b) His parents both had recessive genes for blue eyes.
c) His father had a dominant gene for blue eyes, and his mother had a dominant gene for brown eyes.

Consider this: Humans can carry genes that are not expressed in observable traits but can be passed on to their offspring. LO 2.11: Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
d) His parents both had dominant genes for blue eyes.
Consider this: Humans can carry genes that are not expressed in observable traits but can be passed on to their offspring. LO 2.11: Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
Answer: b
Learning Objective: 2.11: Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Difficult
Skill Level: Understand the Concepts

EOC Q2.28
The results of the Human Genome Project concluded that the human genome has approximately _____ genes.
a) 5,000
Consider this: Researchers expected to find many more genes in the human genome than they actually did. LO 2.11: Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
b) 10,000
Consider this: Researchers expected to find many more genes in the human genome than they actually did. LO 2.11: Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
c) 20,000
d) 50,000
Consider this: Researchers expected to find many more genes in the human genome than they actually did. LO 2.11: Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
Answer: c
Learning Objective: 2.11: Recall the role of chromosomes, genes, and DNA in determining the expression of traits and behaviors.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Moderate
Skill Level: Remember the Facts

EOC Q2.29
The study of how the external environment can influence and change gene functions is called _____.
a) epigenetics
b) genetic restructuring
Consider this: Genes are not constant and unchanging; they are influenced by their environment, which even includes life in utero. LO 2.12: Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
c) heritability studies

Consider this: Genes are not constant and unchanging; they are influenced by their environment, which even includes life in utero. LO 2.12: Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
d) epidemiology
Consider this: Genes are not constant and unchanging; they are influenced by their environment, which even includes life in utero. LO 2.12: Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.

Answer: a
Learning Objective: 2.12: Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Moderate
Skill Level: Understand the Concepts

EOC Q2.30
Behavioral geneticists use twin and adoption studies to examine the role of genetics. In general, adopted individuals have traits that _____.

a) come from a mixture of genes from both biological and adopted parents
Consider this: Identical twins who are separated at birth often have very similar personalities and interests. LO 2.12: Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
b) resemble their biological parents
c) resemble their adoptive parents
Consider this: Identical twins who are separated at birth often have very similar personalities and interests. LO 2.12: Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
d) don’t resemble either their biological or adoptive parents
Consider this: Identical twins who are separated at birth often have very similar personalities and interests. LO 2.12: Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.

Answer: b
Learning Objective: 2.12: Describe how the field of behavioral genetics contributes to the understanding of human behavior and disease.
Topic: Neuroscience and the Biology of Behavior
Difficulty Level: Moderate
Skill Level: Apply What You Know