

✓ Chapter 2

1. Phrenology highlighted the presumed functions of

- A. specific brain regions.
- B. synaptic gaps.
- C. endorphins.
- D. the myelin sheath.

Answer: A

2. The person most likely to suggest that the shape of a person's skull indicates the extent to which that individual is argumentative and aggressive would be a

- A. neurologist.
- B. behavior geneticist.
- C. psychoanalyst.
- D. phrenologist.

Answer: D

3. Dr. Wolski does research on the potential relationship between neurotransmitter deficiencies and mood states. Which psychological specialty does Dr. Wolski's research best represent?

- A. phrenology
- B. biological psychology
- C. psychoanalysis
- D. social psychology

Answer: B

4. A biological psychologist would be most interested in conducting research on the relationship between

- A. neurotransmitters and depression.
- B. skull shape and bone density.
- C. self-esteem and popularity.
- D. genetics and eye color.

Answer: A

5. To fully appreciate the interaction of neural activity, mental processes, and the functioning of human communities, it is most necessary to recognize that people are

- A. consciously aware.
- B. morally accountable.
- C. biopsychosocial systems.
- D. products of multiple neural networks.

Answer: C

6. For you to experience the pain of a sprained ankle, _____ must first relay incoming pain messages from your ankle to your spinal cord.
- A. the limbic system
 - B. glial cells
 - C. motor neurons
 - D. sensory neurons

Answer: D

7. Neurons that function within the brain and spinal cord are called
- A. sensory neurons.
 - B. interneurons.
 - C. glial cells.
 - D. motor neurons.

Answer: B

8. Some neurons enable you to grasp objects by relaying outgoing messages to the muscles in your arms and hands. These neurons are called
- A. glial cells.
 - B. sensory neurons.
 - C. neural prosthetics.
 - D. motor neurons.

Answer: D

9. Dendrites are branching extensions of
- A. neurotransmitters.
 - B. endorphins.
 - C. neurons.
 - D. glial cells.

Answer: C

10. The function of dendrites is to
- A. receive incoming signals from other neurons.
 - B. release neurotransmitters into the spatial junctions between neurons.
 - C. coordinate the activation of the parasympathetic and sympathetic nervous systems.
 - D. control pain through the release of opiatelike chemicals into the brain.

Answer: A

11. An axon is
- A. a cell that serves as the basic building block of the nervous system.
 - B. a layer of fatty tissue that encases the fibers of many neurons.
 - C. an antagonist molecule that blocks neurotransmitter receptor sites.

D. the extension of a neuron that carries messages away from the cell body.

Answer: D

12. The longest part of a motor neuron is likely to be the

- A.** dendrite.
- B.** axon.
- C.** cell body.
- D.** synapse.

Answer: B

13. In transmitting sensory information to the brain, an electrical signal travels from the _____ of a single neuron.

- A.** dendrites to the axon to the cell body
- B.** axon to the cell body to the dendrites
- C.** dendrites to the cell body to the axon
- D.** axon to the dendrites to the cell body

Answer: C

14. The speed at which a neural impulse travels is increased when the axon is encased by a(n)

- A.** association area.
- B.** myelin sheath.
- C.** glial cell.
- D.** synaptic vesicle.

Answer: B

15. A brief electrical charge that travels down the axon of a neuron is called the

- A.** synapse.
- B.** agonist.
- C.** action potential.
- D.** refractory period.

Answer: C

16. An action potential is generated by the movement of

- A.** glial cells.
- B.** hormones.
- C.** vesicles.
- D.** ions.

Answer: D

17. The resting potential of an axon results from the fact that an axon membrane is

- A.** encased by a myelin sheath.
- B.** selectively permeable.

- C. sensitive to neurotransmitter molecules.
- D. part of a larger neural network.

Answer: B

18. The depolarization of a neural membrane can create a(n)
- A. action potential.
 - B. myelin sheath.
 - C. neural network.
 - D. interneuron.

Answer: A

19. With regard to the process of neural transmission, a refractory period refers to a time interval in which
- A. a neuron fires more rapidly than usual.
 - B. an electrical charge travels from a sensory neuron to a motor neuron.
 - C. positively charged ions are pumped back outside a neural membrane.
 - D. an individual reflexively withdraws from a pain stimulus.

Answer: C

20. The minimum level of stimulation required to trigger a neural impulse is called the
- A. reflex.
 - B. threshold.
 - C. synapse.
 - D. action potential.

Answer: B

21. Increasing excitatory signals above the threshold for neural activation will not affect the intensity of an action potential. This indicates that a neuron's reaction is
- A. inhibited by the myelin sheath.
 - B. delayed by the refractory period.
 - C. an all-or-none response.
 - D. dependent on neurotransmitter molecules.

Answer: C

22. A slap on the back is more painful than a pat on the back because a slap triggers
- A. the release of endorphins.
 - B. more intense neural impulses.
 - C. the release of GABA.
 - D. more neurons to fire, and to fire more often.

Answer: D

23. Sir Charles Sherrington observed that impulses took an unexpectedly long time to travel a neural pathway. His observation provided evidence for the existence of

- A. association areas.
- B. synaptic gaps.
- C. interneurons.
- D. neural networks.

Answer: B

24. A synapse is a(n)
- A. chemical messenger that triggers muscle contractions.
 - B. automatic response to sensory input.
 - C. junction between a sending neuron and a receiving neuron.
 - D. neural cable containing many axons.

Answer: C

25. The chemical messengers released into the spatial junctions between neurons are called
- A. hormones.
 - B. neurotransmitters.
 - C. synapses.
 - D. genes.

Answer: B

26. Neurotransmitters are released from vesicles located on knoblike terminals at the end of the
- A. dendrites.
 - B. cell body.
 - C. axon.
 - D. myelin sheath.

Answer: C

27. Reuptake refers to the
- A. movement of neurotransmitter molecules across a synaptic gap.
 - B. release of hormones into the bloodstream.
 - C. inflow of positively charged ions through an axon membrane.
 - D. reabsorption of excess neurotransmitter molecules by a sending neuron.

Answer: D

28. Transferring messages from a motor neuron to a leg muscle requires the neurotransmitter known as
- A. dopamine.
 - B. epinephrine.
 - C. acetylcholine.
 - D. insulin.

Answer: C

29. Endorphins are

- A.** neurotransmitters.
- B.** sex hormones.
- C.** endocrine glands.
- D.** morphine antagonists.

Answer: A

30. Opiate drugs occupy the same receptor sites as

- A.** serotonin.
- B.** endorphins.
- C.** dopamine.
- D.** epinephrine.

Answer: B

31. José has just played a long, bruising football game but feels little fatigue or discomfort. His lack of pain is most likely caused by the release of

- A.** glutamate.
- B.** dopamine.
- C.** acetylcholine.
- D.** endorphins.

Answer: D

32. Alzheimer's disease is most closely linked to the deterioration of neurons that produce

- A.** dopamine.
- B.** acetylcholine.
- C.** epinephrine.
- D.** endorphins.

Answer: B

33. Schizophrenia is most closely linked with excess receptor activity for the neurotransmitter

- A.** dopamine.
- B.** epinephrine.
- C.** acetylcholine.
- D.** serotonin.

Answer: A

34. An undersupply of serotonin is most closely linked to

- A. Alzheimer's disease.
- B. schizophrenia.
- C. Parkinson's disease.
- D. depression.

Answer: D

35. An undersupply of the major inhibitory neurotransmitter known as _____ is linked to seizures.

- A. glutamate
- B. GABA
- C. serotonin
- D. ACh

Answer: B

36. Migraine headaches are most closely linked with an

- A. oversupply of GABA.
- B. undersupply of serotonin.
- C. oversupply of glutamate.
- D. undersupply of acetylcholine.

Answer: C

37. The body's natural production of endorphins is likely to be

- A. increased by heroin use and increased by vigorous exercise.
- B. decreased by heroin use and decreased by vigorous exercise.
- C. increased by heroin use and decreased by vigorous exercise.
- D. decreased by heroin use and increased by vigorous exercise.

Answer: D

38. Jason's intensely uncomfortable withdrawal symptoms following heroin use were probably due in part to a reduction in his body's normal production of

- A. dopamine.
- B. epinephrine.
- C. acetylcholine.
- D. endorphins.

Answer: D

39. A drug that mimics the effects of a particular neurotransmitter or blocks its reuptake is called a(n)

- A. glutamate.
- B. steroid.
- C. agonist.
- D. opiate.

Answer: C

40. Endorphin agonists are likely to _____ one's immediate pain, and endorphin antagonists are likely to _____ one's immediate pain.
- A. decrease; increase
 - B. increase; decrease
 - C. increase; increase
 - D. decrease; decrease

Answer: A

41. Botulin poisoning from improperly canned food causes paralysis by blocking the release of
- A. endorphins.
 - B. epinephrine.
 - C. acetylcholine.
 - D. dopamine.

Answer: C

42. Curare is
a
paralyzing
poison
that
functions
as a(n)
- A. ACh agonist.
 - B. GABA agonist.
 - C. ACh antagonist.
 - D. GABA antagonist.

Answer: C

43. The two major divisions of the nervous system are the central and the _____ nervous systems.
- A. autonomic
 - B. sympathetic
 - C. somatic
 - D. peripheral

Answer: D

44. The central nervous system consists of
- A. sensory and motor neurons.

- B. somatic and autonomic systems.
- C. the brain and the spinal cord.
- D. sympathetic and parasympathetic branches.

Answer: C

45. Sensory neurons are located in the

- A. thalamus.
- B. reticular formation.
- C. peripheral nervous system.
- D. sensory cortex.

Answer: C

46. Messages are transmitted from your spinal cord to muscles in your hands by the _____ nervous system.

- A. peripheral
- B. parasympathetic
- C. sympathetic
- D. autonomic

Answer: A

47. PNS information travels through axons that are bundled into the cables that we call

- A. interneurons.
- B. action potentials.
- C. nerves.
- D. association areas.

Answer: C

48. The somatic nervous system is a component of the _____ nervous system.

- A. peripheral
- B. central
- C. sympathetic
- D. parasympathetic

Answer: A

49. The part of the peripheral nervous system that controls the glands and the muscles of the internal organs is called the

- A. somatic nervous system.
- B. reticular formation.
- C. limbic system.
- D. autonomic nervous system.

Answer: D

50. Messages are transmitted from your spinal cord to your heart muscles by the

- A. limbic system.
- B. somatic nervous system.
- C. central nervous system.
- D. autonomic nervous system.

Answer: D

51. Which division of the autonomic nervous system arouses the body and mobilizes its energy in stressful situations?

- A. the limbic system.
- B. the sympathetic nervous system
- C. the somatic nervous system.
- D. the central nervous system.

Answer: B

52. You come home one night to find a burglar in your house. Your heart starts racing and you begin to perspire. These physical reactions are triggered by the

- A. somatic nervous system.
- B. sympathetic nervous system.
- C. parasympathetic nervous system.
- D. sensory cortex.

Answer: B

53. The parasympathetic nervous system

- A. stimulates digestion and slows heartbeat.
- B. inhibits digestion and accelerates heartbeat.
- C. stimulates digestion and accelerates heartbeat.
- D. inhibits digestion and slows heartbeat.

Answer: A

54. After discovering that the shadows outside his window were only the trees in the yard, Ralph's blood pressure decreased and his heartbeat slowed. These physical reactions were most directly regulated by his

- A. parasympathetic nervous system.
- B. sympathetic nervous system.
- C. somatic nervous system.
- D. hippocampus.

Answer: A

55. An accelerated heartbeat is to a slowed heartbeat as the _____ nervous system is to the _____ nervous system.

- A. somatic; autonomic
- B. autonomic; somatic
sympathetic; parasympathetic

- C.
- D. parasympathetic; sympathetic

Answer: C

56. Neural networks refer to

- A. the branching extensions of a neuron.
- B. interrelated clusters of neurons in the central nervous system.
- C. neural cables containing many axons.
- D. junctions between sending and receiving neurons.

Answer: B

57. The strengthening of synaptic connections facilitates the formation of

- A. interneurons.
- B. endorphins.
- C. neural networks.
- D. glial cells.

Answer: C

58. A football quarterback can simultaneously make calculations of receiver distances, player movements, and gravitational forces. This best illustrates the activity of multiple

- A. endocrine glands.
- B. endorphin agonists.
- C. neural networks.
- D. reticular formations.

Answer: C

59. The part of the central nervous system that carries information from your senses to your brain and motor-control information to your body parts is the

- A. pituitary gland.
- B. pancreas.
- C. spinal cord.
- D. reticular formation.

Answer: C

60. A simple, automatic, inborn response to a sensory stimulus is called a(n)

- A. neural network.
- B. action potential.
- C. neurotransmitter.
- D. reflex.

Answer: D

61. The knee-jerk reflex is controlled by interneurons in the

- A. limbic system.
- B. spinal cord.
- C. brainstem.
- D. cerebellum.

Answer: B

62. In a tragic diving accident, Andrew damaged his spinal cord. As a result, his legs were paralyzed. Andrew's injury was located in his
- A. somatic nervous system.
 - B. limbic system.
 - C. sympathetic nervous system.
 - D. central nervous system.

Answer: D

63. Aaron consistently exhibits a knee-jerk response without having any sensations of the taps on his knees. Aaron's experience is most indicative of a
- A. split brain.
 - B. severed spinal cord.
 - C. hemispherectomy.
 - D. reward deficiency syndrome.

Answer: B

64. Hormones are the chemical messengers of the
- A. autonomic nervous system.
 - B. endocrine system.
 - C. limbic system.
 - D. reticular formation.

Answer: B

65. Hormones, the chemical messengers of the endocrine system, travel through the bloodstream to affect other
- A. axons.
 - B. tissues.
 - C. synapses.
 - D. neurons.

Answer: B

66. Endocrine glands secrete hormones directly into
- A. synaptic gaps.
 - B. the bloodstream.
 - C. the limbic system.
 - D. sensory neurons.

Answer: B

67. The ovaries in females and the testes in males are part of the

- A. limbic system.
- B. endocrine system.
- C. sympathetic nervous system.
- D. central nervous system.

Answer: B

68. If a professor accused you of cheating on a test, your adrenal glands would probably release _____ into your bloodstream.

- A. endorphins
- B. acetylcholine
- C. epinephrine
- D. insulin

Answer: C

69. The master gland of the endocrine system is the

- A. thyroid gland.
- B. adrenal gland.
- C. pituitary gland.
- D. pancreas.

Answer: C

70. At the age of 22, Mrs. LaBlanc was less than 4 feet tall. Her short stature was probably influenced by the lack of a growth hormone produced by the

- A. pancreas.
- B. thyroid.
- C. adrenal gland.
- D. pituitary gland.

Answer: D

71. The hypothalamus influences the _____ to send messages to the _____.

- A. cerebellum; amygdala
- B. pituitary; endocrine glands

- C. motor neurons; sensory neurons
- D. thalamus; angular gyrus

Answer: B

72. Surgical destruction of brain tissue is called a(n)

- A. EEG.
- B. synapse.
- C. lesion.
- D. MRI.

Answer: C

73. An amplified recording of the waves of electrical activity that sweep across the surface of the brain is called a(n)

- A. fMRI.
- B. EEG.
- C. PET scan.
- D. MRI.

Answer: B

74. To identify which of Lucy's brain areas was most active when she talked, neuroscientists gave her a temporarily radioactive form of glucose and a(n)

- A. hemispherectomy.
- B. PET scan.
- C. EEG.
- D. MRI scan.

Answer: B

75. The best way to detect enlarged fluid-filled brain regions in some patients who have schizophrenia is to use a(n)

- A. EEG.
- B. MRI.
- C. PET scan.
- D. brain lesion.

Answer: B

76. To identify which specific brain areas are most active during a particular mental task, researchers would be most likely to make use of a(n)

- A. fMRI.
- B. hemispherectomy.
- C. ACh agonist.
- D. brain lesion.

Answer: A

77. The sequence of brain regions from the evolutionarily oldest to newest is

- A. limbic system, brainstem, cerebral cortex.
- B. brainstem, cerebral cortex, limbic system.
- C. limbic system, cerebral cortex, brainstem.
- D. brainstem, limbic system, cerebral cortex.

Answer: D

78. The part of the brainstem that controls heartbeat and breathing is called the

- A. cerebellum.
- B. medulla.
- C. amygdala.
- D. thalamus.

Answer: B

79. If your _____ is destroyed, the left side of your brain could not control the movements of your right hand.

- A. brainstem
- B. hippocampus
- C. amygdala
- D. corpus callosum

Answer: A

80. The reticular formation is located in the

- A. brainstem.
- B. limbic system.
- C. sensory cortex.
- D. cerebellum.

Answer: A

81. Which region of your brainstem plays a role in arousing you to a state of alertness when someone nearby mentions your name?

- A. reticular formation
- B. cerebellum
- C. amygdala
- D. medulla

Answer: A

82. Severing a cat's reticular formation from higher brain regions causes the cat to

- A. become violently aggressive.
- B. cower in fear.
- C. experience convulsive seizures.
- D. lapse into a coma.

Answer: D

83. Which brain structure receives information from all the senses except smell?

- A. hippocampus
- B. amygdala
- C. pons
- D. thalamus

Answer: D

84. Which brain structure relays information from the eyes to the visual cortex?

- A. thalamus
- B. amygdala
- C. medulla
- D. cerebellum

Answer: A

85. Information from higher brain regions is transmitted to the medulla through the

- A. corpus callosum.
- B. hippocampus.
- C. angular gyrus.
- D. thalamus.

Answer: D

86. The “little brain” attached to the rear of the brainstem is called the

- A. limbic system.
- B. corpus callosum.
- C. cerebellum.
- D. reticular formation.

Answer: C

87. After Kato's serious motorcycle accident, doctors detected damage to his cerebellum. Kato is most likely to have difficulty

- A. reading printed words.
- B. understanding what others are saying.
- C. tasting the flavors of foods.
- D. playing his guitar.

Answer: D

88. Conscious information processing is LEAST likely to be required for the automatic physical survival functions regulated by the

- A. hippocampus.
- B. sensory cortex.
- C. brainstem.

D. frontal lobes.

Answer: C

89. A neural system at the border of the brainstem and the cerebral hemispheres is known as the

- A.** sensory cortex.
- B.** limbic system.
- C.** reticular formation.
- D.** peripheral nervous system.

Answer: B

90. Which of the following is the component of the limbic system that plays an essential role in the processing of new memories?

- A.** hypothalamus
- B.** thalamus
- C.** hippocampus
- D.** medulla

Answer: C

91. To demonstrate that brain stimulation can make a rat violently aggressive, a neuroscientist should electrically stimulate the rat's

- A.** reticular formation.
- B.** cerebellum.
- C.** medulla.
- D.** amygdala.

Answer: D

92. A brain tumor caused extensive damage to Mr. Thorndike's hypothalamus. It is most likely that he may suffer a loss of

- A.** visual perception.
- B.** muscular coordination.
- C.** sexual motivation.
- D.** language comprehension.

Answer: C

93. The brain structure that provides a major link between the nervous system and the endocrine system is the

- A.** cerebellum.
- B.** amygdala.
- C.** reticular formation.
- D.** hypothalamus.

Answer: D

94. Olds and Milner located reward centers in the brain structure known as the

- A. hypothalamus.
- B. cerebellum.
- C. medulla.
- D. amygdala.

Answer: A

95. Addictive disorders are likely to be associated with reward centers in the

- A. thalamus.
- B. cerebellum.
- C. reticular formation.
- D. limbic system.

Answer: D

96. The cerebral cortex is the covering layer of the

- A. brainstem.
- B. corpus callosum.
- C. amygdala.
- D. cerebrum.

Answer: D

97. Your conscious awareness of your own name and self-identity depends primarily on the normal functioning of your

- A. cerebellum.
- B. amygdala.
- C. hypothalamus.
- D. cerebral cortex.

Answer: D

98. One function of glial cells is to

- A. control heartbeat and breathing.
- B. mimic the effects of neurotransmitters.
- C. provide nutrients to interneurons.
- D. stimulate the production of hormones.

Answer: C

99. Which lobes of the brain receive the input that enables you to feel someone scratching your back?

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

Answer: A

100. The surgical removal of a large tumor from Dane's occipital lobe resulted in extensive loss of brain tissue. Dane is most likely to suffer some loss of

- A. muscular coordination.
- B. visual perception.
- C. speaking ability.
- D. pain sensations.

Answer: B

101. Auditory stimulation is first processed in the _____ lobes.

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

Answer: B

102. The occipital lobes are to _____ as the temporal lobes are to _____.

- A. hearing; sensing movement
- B. seeing; sensing touch
- C. seeing; hearing
- D. speaking; hearing

Answer: C

103. The motor cortex is located in the _____ lobes.

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

Answer: C

104. A laboratory cat could be made to twitch its whiskers by direct stimulation of the _____ lobes of its cerebral cortex.

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

Answer: C

105. Which of the following body parts is associated with the greatest amount of brain tissue in the motor cortex?

- A. arms
- B. face
- C. trunk

D. knees

Answer: B

106. By simply thinking about a move, which activates their brain cells, people may be able to move a robotic arm. This best illustrates

- A.** neurogenesis.
- B.** constraint-induced therapy.
- C.** neural prosthetics.
- D.** magnetic resonance imaging.

Answer: C

107. In a clinical trial of neural prosthetics with paralyzed humans, a 25-year-old man constructed shapes on a computer screen by activating neurons in his

- A.** sensory cortex.
- B.** cerebellum.
- C.** motor cortex.
- D.** amygdala.

Answer: C

108. The sensory cortex is most critical for our sense of

- A.** sight.
- B.** hearing.
- C.** touch.
- D.** smell.

Answer: C

109. Which part of your brain receives information that you are moving your legs?

- A.** amygdala
- B.** motor cortex
- C.** sensory cortex
- D.** hypothalamus

Answer: C

110. Which of the following body parts is associated with the greatest amount of brain tissue in the sensory cortex?

- A.** toes
- B.** knees
- C.** neck
- D.** lips

Answer: D

111. The auditory hallucinations experienced by people with schizophrenia are most closely linked with the activation of areas in their

- A. motor cortex.
- B. amygdala.
- C. temporal lobes.
- D. hypothalamus.

Answer: C

112. The association areas are located in the

- A. brainstem.
- B. thalamus.
- C. limbic system.
- D. cerebral cortex.

Answer: D

113. The most extensive regions of the brain, which enable learning and memory, are called the

- A. reticular formation.
- B. medulla.
- C. cerebellum.
- D. association areas.

Answer: D

114. The process of anticipating that you will be punished for misbehaving takes place in the

- A. sensory cortex.
- B. reticular formation.
- C. association areas.
- D. sympathetic nervous system.

Answer: C

115. After he suffered a stroke, Mr. Santore's physical coordination skills and responsiveness to sensory stimulation quickly returned to normal. Unfortunately, however, he could no longer figure out how to find his way around his neighborhood. It is most likely that Mr. Santore suffered damage to his

- A. cerebellum.
- B. thalamus.
- C. hypothalamus.
- D. association areas.

Answer: D

116. People's moral judgments are most likely to seem unrestrained by normal emotions if they have suffered damage to their

- A. cerebellum.
- B. sensory cortex.
- C. corpus callosum.
- D. frontal cortex.

Answer: D

117. The inability to recognize familiar faces even though one can clearly see and describe features of the faces is associated with damage to the right _____ lobe.

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

Answer: D

118. The capacity of one brain area to take over the functions of another damaged brain area is known as brain

- A. tomography.
- B. phrenology.
- C. resonance.
- D. plasticity.

Answer: D

119. By restraining the use of his left hand, doctors helped Bruce to use and improve the coordination skills of his right hand. The doctors employed a technique known as

- A. neural prosthetics.
- B. hemispherectomy.
- C. position emission tomography.
- D. constraint-induced therapy.

Answer: D

120. Brain plasticity may contribute to the effectiveness of

- A. phrenology.
- B. electroencephalograms.
- C. constraint-induced therapy.
- D. magnetic resonance imaging.

Answer: C

121. The visual cortex is activated when blind people read Braille. This best illustrates

- A. plasticity.
- B. neural prosthetics.
- C. hemispherectomy.
- D. phrenology.

Answer: A

122. The benefits of brain plasticity are

most clearly
demonstrated
in

- A. children who have had a cerebral hemisphere surgically removed.
- B. people paralyzed by a severed spinal cord.
- C. individuals with Alzheimer's disease.
- D. split-brain patients.

Answer: A

123. A person whose hand had been amputated actually felt sensations on his nonexistent fingers when his arm was stroked. This best illustrates the consequences of

- A. tomography.
- B. brain plasticity.
- C. lateralization.
- D. neural prosthetics.

Answer: B

124. By forming thousands of new neurons each day, monkey brains illustrate

- A. reuptake.
- B. hemispherectomy.
- C. neurogenesis.
- D. neural prosthetics.

Answer: C

125. The localization of a function such as speech production to the right or left side of the brain is called

- A. neurogenesis.
- B. lateralization.
- C. hemispherectomy.
- D. plasticity.

Answer: B

126. Damage to the left cerebral hemisphere is most likely to reduce people's ability to

- A. solve arithmetic problems.
- B. copy drawings.
- C. recognize faces.
- D. recognize familiar melodies.

Answer: A

127. The corpus callosum is a wide band of axon fibers that

- A. enables the left hemisphere to control the right side of the body.
- B. transmits information between the cerebral hemispheres.

- C. controls the glands and muscles of the internal organs.
- D. directs the muscle movements involved in speech.

Answer: B

128. Those whose corpus callosum is surgically severed are said to be patients with
- A. brain plasticity.
 - B. phrenology.
 - C. neurogenesis.
 - D. split brains.

Answer: D

129. Neurosurgeons have severed the corpus callosum in human patients in order to reduce
- A. Alzheimer's disease.
 - B. epileptic seizures.
 - C. neural plasticity.
 - D. reward deficiency syndrome.

Answer: B

130. A picture of a dog is briefly flashed in the left visual field of a split-brain patient. At the same time a picture of a boy is flashed in the right visual field. In identifying what she saw, the patient would be most likely to
- A. use her left hand to point to a picture of a dog.
 - B. verbally report that she saw a dog.
 - C. use her left hand to point to a picture of a boy.
 - D. verbally report that she saw a boy.

Answer: D

131. The ability to simultaneously copy different figures with the right and left hand is most characteristic of those whose _____ has been cut.
- A. angular gyrus
 - B. reticular formation
 - C. corpus callosum
 - D. motor cortex

Answer: C

132. In a recent car accident, Tamiko sustained damage to his right cerebral hemisphere. This injury is most likely to reduce Tamiko's ability to
- A. facially portray emotions.
 - B. solve arithmetic problems.
 - C. understand simple verbal requests.
 - D. pronounce familiar words.

Answer: A

133. When a person speaks, brain waves and bloodflow are especially likely to reveal increased activity in the
- A. hypothalamus.
 - B. left hemisphere.
 - C. amygdala.
 - D. right hemisphere.

Answer: B

134. Deaf people who use sign language typically
- A. demonstrate greater mathematical competence than hearing persons.
 - B. process language in their left cerebral hemisphere.
 - C. recognize facial expressions of emotion with their left rather than their right cerebral hemisphere.
 - D. have a smaller corpus callosum than hearing persons.

Answer: B

135. People's failure to recognize themselves in a mirror is most likely to be associated with damage to the
- A. sympathetic nervous system.
 - B. left cerebral hemisphere.
 - C. parasympathetic nervous system.
 - D. right cerebral hemisphere.

Answer: D

136. Compared with right-handers, left-handers are
- A. more likely to experience migraine headaches and less likely to suffer from allergies.
 - B. less likely to experience migraine headaches and more likely to suffer from allergies.
 - C. more likely to experience migraine headaches and more likely to suffer from allergies.
 - D. less likely to experience migraine headaches and less likely to suffer from allergies.

Answer: C

137. Left-handedness is _____ common than usual among mathematicians and _____ common than usual among artists.
- A. less; more
 - B. less; less
 - C. more; less
 - D. more; more

Answer: D

138. In Roger Sperry's view, the brain creates and controls the mind, which in turn influences the brain. Sperry understands the mind and brain as a
- A. neural prosthetic.
 - B. holistic system.
 - C. reward center.

D. complex machine.

Answer: B

139. Aristotle believed that the mind was most intimately connected with the

- A.** head.
- B.** stomach.
- C.** heart.
- D.** liver.

Answer: C

140. The nineteenth-century theory that bumps on the skull reveal a person's abilities and traits is called

- A.** evolutionary psychology.
- B.** behavior genetics.
- C.** biological psychology.
- D.** phrenology.

Answer: D

141. Who first suggested that different regions of the brain control different aspects of behavior?

- A.** Aristotle
- B.** Charles Sherrington
- C.** Plato
- D.** Franz Gall

Answer: D

142. Professor Seif conducts research on the relationship between the limbic system and sexual motivation. Her research interests best represent the psychological specialty known as

- A.** biological psychology.
- B.** psychoanalysis.
- C.** cognitive psychology.
- D.** behavior genetics.

Answer: A

143. Because neural communication occurs within the context of both cultural influences and individual mental processes, people are best understood as

- A.** genetic profiles.
- B.** action potentials.
- C.** biopsychosocial systems.
- D.** neural prosthetics.

Answer: C

144. The cells that serve as the basic building blocks of the body's information system are called

- A.** neurons.

- B. neurotransmitters.
- C. vesicles.
- D. genes.

Answer: A

145. Information is carried from the tissues of the body to the brain and spinal cord by

- A. interneurons.
- B. sensory neurons.
- C. motor neurons.
- D. endocrine glands.

Answer: B

146. Sensory neurons transmit signals to

- A. glands.
- B. glial cells.
- C. motor neurons.
- D. interneurons.

Answer: D

147. Information travels from the spinal cord to the brain via

- A. interneurons.
- B. the circulatory system.
- C. sensory neurons.
- D. the sympathetic nervous system.

Answer: A

148. The branching extensions of nerve cells that receive incoming signals from sensory receptors or from other neurons are called the

- A. axons.
- B. synapses.
- C. dendrites.
- D. neurotransmitters.

Answer: C

149. The part of a neuron that transmits neural messages to other neurons or to muscles or glands is called the

- A. dendrite.
- B. synapse.
- C. axon.
- D. cell body.

Answer: C

150. Signal reception is to _____ as signal transmission is to _____.

- A. interneuron; neural network
- B. dendrite; axon
- C. neurotransmitter; hormone
- D. sympathetic nervous system; parasympathetic nervous system

Answer: B

151. Which part of a neuron is often encased by a fatty myelin sheath?

- A. axon
- B. synaptic gap
- C. cell body
- D. dendrite

Answer: A

152. The myelin sheath helps to increase the _____ of neural impulses.

- A. frequency
- B. intensity
- C. threshold
- D. speed

Answer: D

153. The slowdown of neural communication in multiple sclerosis involves a degeneration of the

- A. amygdala.
- B. corpus callosum.
- C. myelin sheath.
- D. pituitary gland.

Answer: C

154. An action potential refers to a

- A. neural impulse.
- B. synaptic gap.
- C. neurotransmitter.
- D. reflex.

Answer: A

155. The movement of positively charged ions across the membrane of a neuron can produce a(n)

- A. glial cell.
- B. action potential.
- C. myelin sheath.
- D. interneuron.

Answer: B

156. The resting potential of a neuron refers to

- A. a brief electrical charge that travels down the axon.
- B. the storage of neurotransmitter molecules within synaptic vesicles.
- C. the electrical polarization of the inside and outside of the neural membrane.
- D. a capacity to reabsorb neurotransmitter molecules released into the synaptic gap.

Answer: C

157. The selective permeability of a neural membrane creates a

- A. myelin sheath.
- B. resting potential.
- C. neural network.
- D. lesion.

Answer: B

158. The depolarization of an axon is most likely to occur when

- A. positively charged ions rush into the axon.
- B. negatively charged ions rush into the axon.
- C. positively charged ions rush out of the axon.
- D. negatively charged ions rush out of the axon.

Answer: A

159. A neural impulse is generated only when excitatory minus inhibitory signals exceed a certain

- A. action potential.
- B. synaptic gap.
- C. tomography.
- D. threshold.

Answer: D

160. An all-or-none response pattern is characteristic of the

- A. activation of either the sympathetic or the parasympathetic system.
- B. release of endorphins into the central nervous system.
- C. release of hormones into the bloodstream.
- D. initiation of neural impulses.

Answer: D

161. The junctions where impulses are chemically transmitted from one neuron to another are called

- A. vesicles.
- B. synapses.
- C. association areas.
- D. thresholds.

D.

Answer: B

162. Neurotransmitters are chemical messengers that travel across the

- A. cell body.
- B. synaptic gap.
- C. myelin sheath.
- D. threshold.

Answer: B

163. Neurotransmitters bind to receptor sites and influence the flow of _____ into receiving neurons.

- A. electrically charged atoms
- B. glial cells
- C. myelin
- D. hormones

Answer: A

164. Neurotransmitter receptor sites are primarily located on the

- A. dendrites.
- B. myelin sheath.
- C. glial cells.
- D. axon terminals.

Answer: A

165. The reuptake of a neurotransmitter such as serotonin would involve the reabsorption of serotonin into a(n)

- A. axon terminal.
- B. receiving neuron.
- C. myelin sheath.
- D. glial cell.

Answer: A

166. The reabsorption of excess neurotransmitter molecules by a sending neuron is called

- A. an action potential.
- B. neurogenesis.
- C. plasticity.
- D. reuptake.

Answer: D

167. Acetylcholine is a neurotransmitter that

- A. causes sleepiness.
- B. lessens physical pain.

- C. reduces depressed moods.
- D. triggers muscle contractions.

Answer: D

168. When the transmission of ACh is blocked, the result is

- A. depression.
- B. aggression.
- C. muscular paralysis.
- D. schizophrenia.

Answer: C

169. Endorphins are neurotransmitter molecules similar to

- A. dopamine.
- B. serotonin.
- C. morphine.
- D. acetylcholine.

Answer: C

170. Endorphins are most directly involved in the control of

- A. body temperature.
- B. physical pain.
- C. muscle contraction.
- D. attention.

Answer: B

171. The pain of childbirth is most likely to be reduced by the release of

- A. acetylcholine.
- B. endorphins.
- C. dopamine.
- D. glutamate.

Answer: B

172. After three hours of playing a physically exhausting professional tennis match, Chitra began to experience feelings of exhilaration and pleasure. It is likely that her feelings were most directly linked to the release of

- A. dopamine.
- B. acetylcholine.
- C. endorphins.
- D. growth hormones.

Answer: C

173. The tremors of Parkinson's disease result from the death of nerve cells that produce the neurotransmitter

- A. serotonin.
- B. ACh.
- C. GABA.
- D. dopamine.

Answer: D

174. Prozac is an antidepressant drug that increases the level of the neurotransmitter

- A. GABA.
- B. ACh.
- C. serotonin.
- D. dopamine.

Answer: C

175. An undersupply of GABA is most closely linked to

- A. schizophrenia.
- B. paralysis.
- C. insomnia.
- D. Alzheimer's disease.

Answer: C

176. Seizures are likely to be associated with an

- A. undersupply of GABA and an oversupply of glutamate.
- B. oversupply of GABA and an undersupply of glutamate.
- C. undersupply of GABA and an undersupply of glutamate.
- D. oversupply of GABA and an oversupply of glutamate.

Answer: A

177. The body's own natural production of endorphins is likely to be suppressed by

- A. physical pain.
- B. physical exercise.
- C. heroin usage.
- D. antidepressant drugs.

Answer: C

178. The venom of the black widow spider causes violent muscle contractions by accelerating the release of

- A. acetylcholine.
- B. serotonin.
- C. endorphins.
- D. epinephrine.

Answer: A

179. Agonists are chemicals that may mimic the activity of

- A. motor neurons.
- B. genes.
- C. synapses.
- D. neurotransmitters.

Answer: D

180. A drug that blocks a neurotransmitter's functioning is called a(n)

- A. opiate.
- B. agonist.
- C. antagonist
- D. glutamate.

Answer: C

181. Morphine functions as a(n)

- A. endorphin agonist.
- B. endorphin antagonist.
- C. dopamine agonist.
- D. dopamine antagonist.

Answer: A

182. Paralysis triggered by botulin poisoning is most likely to be relieved by a(n)

- A. ACh agonist.
- B. serotonin agonist.
- C. ACh antagonist.
- D. serotonin antagonist.

Answer: A

183. The body's speedy electrochemical information system is called the

- A. circulatory system.
- B. cerebral cortex.
- C. nervous system.
- D. endocrine system.

Answer: C

184. Nerves are neural “cables” containing many

- A. endorphins.
- B. interneurons.
- C. axons.
- D. lesions.

Answer: C

- 185.** When Dirk was stung by a bee, the pain message was transmitted to his spinal cord by the _____ nervous system.
- A. sympathetic
 - B. parasympathetic
 - C. peripheral
 - D. central

Answer: C

- 186.** For you to be able to run, _____ must relay messages from your central nervous system to your leg muscles.
- A. interneurons
 - B. motor neurons
 - C. the reticular formation
 - D. the autonomic nervous system

Answer: B

- 187.** Motor neurons are an important part of the
- A. limbic system.
 - B. reticular formation.
 - C. peripheral nervous system.
 - D. motor cortex.

Answer: C

- 188.** The part of the peripheral nervous system that controls the movement of your arms when you write is the
- A. reticular formation.
 - B. sympathetic nervous system.
 - C. somatic nervous system.
 - D. parasympathetic nervous system.

Answer: C

- 189.** Messages are transmitted from your spinal cord to your digestive system's stomach muscles by the
- A. limbic system.
 - B. central nervous system.
 - C. sympathetic nervous system.
 - D. somatic nervous system.

Answer: C

- 190.** The sympathetic nervous system
- A. stimulates digestion and slows heartbeat.
 - B. inhibits digestion and accelerates heartbeat.
 - C. stimulates digestion and accelerates heartbeat.

D. inhibits digestion and slows heartbeat.

Answer: B

191. When Mr. Valdez thought his 1-year-old daughter had fallen down the stairs, his heartbeat accelerated, his blood pressure rose, and he began to perspire heavily. Mr. Valdez's state of arousal was activated by his _____ nervous system.

- A. parasympathetic
- B. sympathetic
- C. somatic
- D. central

Answer: B

192. The parasympathetic nervous system is a division of the _____ nervous system.

- A. autonomic
- B. somatic
- C. central
- D. sympathetic

Answer: A

193. The parasympathetic nervous system is to the sympathetic nervous system as _____ is to _____.

- A. pupil dilation; pupil contraction
- B. raising blood pressure; lowering blood pressure
- C. inhibition of digestion; stimulation of digestion
- D. lowering of blood sugar; raising of blood sugar

Answer: D

194. The neurons of the central nervous system cluster into work groups known as

- A. stem cells.
- B. lesions.
- C. interneurons.
- D. neural networks.

Answer: D

195. The brain's information-processing capacities are most clearly enhanced by

- A. neural networks.
- B. ACh agonists.
- C. lesions.
- D. PET scans.

Answer: A

196. People can simultaneously process many aspects of sensory information such as color, shape, and size. This best illustrates the functioning of multiple

- A. ACh agonists.
- B. reticular formations.
- C. neural networks.
- D. ACh antagonists.

Answer: C

197. The spinal cord is part of the _____ nervous system.

- A. central
- B. peripheral
- C. autonomic
- D. somatic

Answer: A

198. The simplest neural pathways are those that govern our

- A. thoughts.
- B. emotions.
- C. reflexes.
- D. sexual drives.

Answer: C

199. The knee-jerk reflex requires the activity of the

- A. central nervous system.
- B. autonomic nervous system.
- C. limbic system.
- D. cerebellum.

Answer: A

200. Sheelah was able to jerk her hand out of the scalding water before sensing any pain because this withdrawal reflex

- A. was activated by interneurons in her spinal cord.
- B. did not involve any activity within her central nervous system.
- C. was activated by the rapidly responding reticular formation of her brain.
- D. was activated by her self-regulating autonomic nervous system.

Answer: A

201. The body's chemical communication system that is much slower than the nervous system is called the

- A. limbic system.
- B. reticular formation.
- C. cerebellum.
- D. endocrine system.

Answer: D

202. The chemical messengers of the endocrine system are called

- A. neurotransmitters.
- B. hormones.
- C. agonists.
- D. genes.

Answer: B

203. In a moment of danger, an individual's adrenal glands release

- A. ACh.
- B. insulin.
- C. epinephrine.
- D. endorphins.

Answer: C

204. Epinephrine and norepinephrine are released by the

- A. thyroid gland.
- B. pituitary gland.
- C. adrenal glands.
- D. pancreas.

Answer: C

205. The release of epinephrine into the bloodstream is most likely to

- A. lower blood sugar.
- B. lower blood pressure.
- C. stimulate digestion.
- D. accelerate heartbeat.

Answer: D

206. Which endocrine gland regulates body growth?

- A. adrenal
- B. thyroid
- C. pituitary
- D. pancreas

Answer: C

207. A brain lesion refers to _____ of brain tissue.

- A. electrical stimulation
- B. xray photography
- C. radioactive bombardment
- D. destruction

Answer: D

208. Recording electrodes are placed directly on the scalp to produce a(n)

- A. EEG.
- B. PET scan.
- C. MRI.
- D. fMRI.

Answer: A

209. The consumption of glucose in active regions of the brain underlies the usefulness of a(n)

- A. MRI.
- B. brain lesion.
- C. EEG.
- D. PET scan.

Answer: D

210. Which technique involves the use of magnetic fields and radio waves to produce computergenerated images of the brain's soft tissues?

- A. MRI
- B. EEG
- C. hemispherectomy
- D. PET scan

Answer: A

211. To monitor the sequence of activity in different regions of the brain, researchers are most likely to make use of a(n)

- A. brain lesion.
- B. fMRI.
- C. electroencephalogram.
- D. hemispherectomy.

Answer: B

212. Your life would be most immediately threatened if you suffered destruction of the

- A. amygdala
- B. hippocampus.
- C. cerebellum.
- D. medulla.

Answer: D

213. In which brain structure are nerves from the left side of the brain routed to the right side of the body?

- A. thalamus
- B. cerebellum

- C. amygdala
- D. brainstem

Answer: D

214. The reticular formation extends from the spinal cord up to the

- A. thalamus.
- B. sensory cortex.
- C. frontal lobes.
- D. association areas.

Answer: A

215. Which nerve network in the brainstem plays an important role in controlling arousal?

- A. reticular formation
- B. hypothalamus
- C. cerebellum
- D. medulla

Answer: A

216. Stimulation of the reticular formation will cause a

- A. sleeping cat to awaken.
- B. hungry cat to stop eating.
- C. violent cat to become passive.
- D. thirsty cat to drink.

Answer: A

217. The thalamus serves as a

- A. memory bank.
- B. reward center.
- C. sensory switchboard.
- D. master gland.

Answer: C

218. Your ability to experience the physical pleasure of a hot shower is most likely to be disrupted by damage to your

- A. corpus callosum.
- B. hippocampus.
- C. amygdala.
- D. thalamus.

Answer: D

219. A loss of physical coordination and balance is most likely to result from damage to the

- A. hypothalamus.

- B. cerebellum.
- C. corpus callosum.
- D. amygdala.

Answer: B

220. The medulla is to the control of _____ as the cerebellum is to the control of _____.

- A. eating; sleeping
- B. breathing; walking
- C. emotion; motivation
- D. memory; attention

Answer: B

221. The amygdala and hypothalamus are part of the

- A. brainstem.
- B. limbic system.
- C. reticular formation.
- D. cerebral cortex.

Answer: B

222. Which neural center in the limbic system plays a central role in emotions such as aggression and fear?

- A. amygdala
- B. thalamus
- C. cerebellum
- D. medulla

Answer: A

223. If Professor Kosiba lesions the amygdala of a laboratory rat, the rat will most likely become

- A. hungry.
- B. sexually aroused.
- C. physically uncoordinated.
- D. less aggressive.

Answer: D

224. The activity of the hypothalamus most directly influences

- A. thirst.
- B. muscular coordination.
- C. memory.
- D. vision.

Answer: A

225. The secretions of the pituitary gland are most directly regulated by the

- A. reticular formation.
- B. hypothalamus.
- C. amygdala.
- D. cerebellum.

Answer: B

226. James Olds and Peter Milner discovered that rats would willingly cross an electrified floor in order to electrically stimulate areas within their
- A. reticular formation.
 - B. cerebellum.
 - C. hypothalamus.
 - D. sensory cortex.

Answer: C

227. Animal research has revealed a general reward system that triggers the release of the neurotransmitter
- A. ACh.
 - B. GABA.
 - C. dopamine.
 - D. epinephrine.

Answer: C

228. Some researchers believe that binge eating may be linked to
- A. neurogenesis.
 - B. hemispherectomy.
 - C. ACh antagonists.
 - D. a reward deficiency syndrome.

Answer: D

229. The thin surface layer of interconnected neural cells that covers the cerebrum is called the
- A. cerebellum.
 - B. corpus callosum.
 - C. reticular formation.
 - D. cerebral cortex.

Answer: D

230. Which region of the human brain best distinguishes us from other animals?
- A. reticular formation
 - B. cerebral cortex
 - C. limbic system
 - D. hypothalamus

Answer: B

231. Nerve cells in the brain receive life-supporting nutrients and insulating myelin from

- A. glial cells.
- B. neurotransmitters.
- C. motor neurons.
- D. hormones.

Answer: A

232. Which regions of the cerebral cortex lie at the back of the head and receive visual information?

- A. occipital lobes
- B. parietal lobes
- C. temporal lobes
- D. association areas

Answer: A

233. Alana suffered a brain disease that destroyed major portions of her temporal lobes. Alana is most likely to suffer some loss of

- A. auditory perception.
- B. hunger and thirst.
- C. pain sensations.
- D. muscular coordination.

Answer: A

234. The parietal lobes are to _____ as the occipital lobes are to _____.

- A. hearing; speaking
- B. sensing touch; seeing
- C. tasting; smelling
- D. speaking; seeing

Answer: B

235. An area at the rear of the frontal lobes that controls voluntary movements is called the

- A. thalamus.
- B. motor cortex.
- C. reticular formation.
- D. frontal association area.

Answer: B

236. Direct stimulation of the motor cortex would most likely result in

- A. feelings of anger.
- B. acceleration of heartbeat.
- C. a sensation of being touched on the arm.
- D. movement of the mouth and lips.

Answer: D

237. To trigger a person's hand to make a fist, José Delgado stimulated the individual's
- A. motor cortex.
 - B. hypothalamus.
 - C. sensory cortex.
 - D. reticular formation.

Answer: A

238. A monkey with electrodes implanted in its brain is able to move a computer cursor simply by thinking about the move. This best illustrates the potential value of
- A. neural plasticity.
 - B. neurogenesis.
 - C. neural prosthetics.
 - D. brain lesions.

Answer: C

239. Suppose that a speech synthesizer could produce specific words when signaled by the brain activation patterns involved when a person merely thinks about these words. This would be an illustration of
- A. constraint-induced therapy.
 - B. positron emission tomography.
 - C. neurogenesis.
 - D. neural prosthetics.

Answer: D

240. The sensory cortex is located in the _____ lobes.
- A. parietal
 - B. temporal
 - C. frontal
 - D. occipital

Answer: A

241. If a neurosurgeon directly stimulated parts of your sensory cortex, which of the following would you most likely experience?
- A. indistinct odors
 - B. flashes of light
 - C. repetitive sounds
 - D. a sense of being touched

Answer: D

242. The cortical regions that are NOT directly involved in sensory or motor functions are known as
- A. the limbic system.

- B. frontal lobes.
- C. association areas.
- D. parietal lobes.

Answer: C

- 243.** Damage to the association areas in the frontal lobe is most likely to interfere with the ability to
- A. formulate plans.
 - B. recognize familiar faces.
 - C. understand word meanings.
 - D. recognize familiar voices.

Answer: A

- 244.** Phineas Gage underwent a dramatic personality change after a tamping iron inflicted massive damage to his _____ lobes.
- A. parietal
 - B. temporal
 - C. occipital
 - D. frontal

Answer: D

- 245.** The process of comparing currently experienced visual input with past visual memories takes place in
- A. the amygdala.
 - B. the cerebellum.
 - C. association areas.
 - D. the hypothalamus.

Answer: C

- 246.** The region of your cerebral cortex that enables you to recognize a person as your own mother is
- A. the medulla.
 - B. the limbic system.
 - C. the reticular formation.
 - D. an association area.

Answer: D

- 247.** Teaching a patient to regain use of an impaired limb by limiting his or her use of the good limb is called
- A. functional magnetic resonance imaging.
 - B. constraint-induced therapy.
 - C. neural prosthetics.
 - D. phrenology.

Answer: B

- 248.** One stroke patient was put to work cleaning tables, with his good arm and hand restrained. Slowly, the bad arm recovered its skills. He gradually learned to write again and even to play tennis. This best illustrates the value of
- A. hemispherectomy.
 - B. reward deficiency syndrome.
 - C. plasticity.
 - D. neural prosthetics.

Answer: C

- 249.** When Stoyka was a child, a brain disease required the surgical removal of her left cerebral hemisphere. Stoyka is now a successful college student who lives a normal life. Her success best illustrates the importance of
- A. neural prosthetics.
 - B. reuptake.
 - C. phrenology.
 - D. plasticity.

Answer: D

- 250.** Visual information processing in the temporal lobe of Deaf people whose native language is sign best illustrates
- A. neural prosthetics.
 - B. tomography.
 - C. plasticity.
 - D. hemispherectomy.

Answer: C

- 251.** After Terry lost a finger in an industrial accident, the area of his sensory cortex devoted to receiving input from that finger gradually became very responsive to sensory input from his adjacent fingers. This best illustrates
- A. phrenology.
 - B. neurogenesis.
 - C. plasticity.
 - D. tomography.

Answer: C

- 252.** The brain is most likely to compensate for a loss of neurons by
- A. generating new brain cells.
 - B. increasing the speed of the action potential.
 - C. inhibiting the growth of glial cells.
 - D. decreasing the production of acetylcholine.

Answer: A

- 253.** Physical exercise and exposure to stimulating environments are most likely to promote
- A. phrenology.
 - B. neurogenesis.
 - hemispherectomy.

- C.
- D. reward deficiency syndrome.

Answer: B

254. The ability to recognize faces with the right hemisphere but not with the left hemisphere best illustrates
- A. Parkinson's disease.
 - B. neurogenesis.
 - C. plasticity.
 - D. lateralization.

Answer: D

255. Information is most quickly transmitted from one cerebral hemisphere to the other by the
- A. corpus callosum.
 - B. motor cortex.
 - C. limbic system.
 - D. reticular formation.

Answer: A

256. Split-brain patients have had their _____ surgically cut.
- A. limbic system
 - B. corpus callosum
 - C. sensory cortex
 - D. reticular formation

Answer: B

257. The left cerebral hemisphere is typically superior to the right in
- A. spatial reasoning.
 - B. speech production.
 - C. visual perception.
 - D. musical abilities.

Answer: B

258. If an individual's right cerebral hemisphere is completely destroyed by disease, that person is unable to see anything
- A. with his or her right eye.
 - B. with his or her left eye.
 - C. in his or her right field of vision.
 - D. in his or her left field of vision.

Answer: D

259. A picture of a cat is briefly flashed in the left visual field and a picture of a mouse is briefly flashed in the right visual field of a splitbrain patient. The individual will be able to use her

- A. right hand to indicate she saw a cat.
- B. left hand to indicate she saw a mouse.
- C. right hand to indicate she saw a mouse.
- D. left or right hand to indicate she saw a cat.

Answer: C

260. The right hemisphere is superior to the left at
- A. solving arithmetic problems.
 - B. recognizing people's faces.
 - C. understanding simple verbal requests.
 - D. processing information in an orderly sequence.

Answer: B

261. What will most likely happen as a neurosurgeon sedates the entire right cerebral hemisphere of a right-handed patient who is asked to count aloud with both arms extended upward?
- A. The patient's left arm will fall limp and he will become speechless.
 - B. The patient's right arm will fall limp and he will become speechless.
 - C. The patient's left arm will fall limp but he will continue counting aloud.
 - D. The patient's right arm will fall limp but he will continue counting aloud.

Answer: C

262. People who can hear usually process spoken language with the _____ hemisphere. Deaf people usually process sign language with the _____ hemisphere.
- A. right; left
 - B. left; right
 - C. right; right
 - D. left; left

Answer: D

263. If primed with the flashed word *foot*, the _____ hemisphere will be especially quick to recognize the word *heel*. If primed with *foot*, *cry*, and *glass*, the _____ hemisphere will be especially quick to recognize the word *cut*.
- A. right; left
 - B. left, right
 - C. right, right
 - D. left, left

Answer: B

264. A failure to recognize that one's arm or leg is part of one's self is most likely to be associated with damage to the
- A. amygdala.
 - B. hypothalamus.
 - C. right hemisphere.

D. sympathetic nervous system.

Answer: C

265. Research on left-handedness indicates that

- A.** twice as many women as men are left-handed.
- B.** left-handers typically have a smaller corpus callosum than right-handers.
- C.** left-handers are less likely than right-handers to process speech primarily in their left hemisphere.
- D.** left-handers generally demonstrate less mathematical competence than right-handers.

Answer: C

266. To predict the hand preference of newborn infants, you would be best advised to observe how they

- A.** turn their heads.
- B.** kick their feet.
- C.** clench their fists.
- D.** swallow their milk.

Answer: A

267. Left-handers are more numerous than usual among those with

- A.** reading disabilities.
- B.** musical disabilities.
- C.** artistic disabilities.
- D.** mathematical disabilities.

Answer: A

268. According to Roger Sperry, a recognition that the mind cannot be fully explained by the activity of nerve cells is important for appreciating our human capacity for

- A.** lateralization.
- B.** neural plasticity.
- C.** moral responsibility.
- D.** developing neural networks.

Answer: C