Name: _____ Date: _____

1. Discuss some of the most recent discoveries that biological psychologists have made about the links between human biology and behavior and mind.

2. Identify the parts of the neuron and describe their functions; then draw a diagram to demonstrate how an action potential would travel into and through a neuron.

3. Explain what we mean when we say a neuron's response is an all-or-none response.

4. Discuss some of the more common neurotransmitters and their effects on us.

5. Compare and contrast the action of agonist and antagonist drugs and other chemicals. Explain how each of these affects the influence of neurotransmitters.

6. Diagram the divisions and subdivisions of the nervous system. Make sure to explain the responsibilities and functions of each.

7. Rebecca was recently in an automobile accident. Describe the roles of her sympathetic and parasympathetic nervous systems in relation to this experience.

8. Compare and contrast neurotransmitters and hormones, by noting where they come from, how they travel through the body, their roles and responsibilities, and how and for how long they influence us.

9. Describe the five tools currently used to examine the brain's structures and functions as outlined in the text.

10. The human brain took a very long time to evolve. Outline how the brain has evolved, beginning with the most primitive brain structures to the newest brain structures.

11. Define the limbic system, and describe the roles and responsibilities of its structures.

12. Compare and contrast the four lobes of the brain. Where are they located, and what are their functions?

13. Five years ago, Nathan was in a serious car accident that damaged his brain. Miraculously, he has made a full recovery. Explain how his brain modified or repaired itself after experiencing damage.

14. Mark and Paul are identical twins. Explain what twin and adoption studies reveal about the extent to which variations in heredity and in home environments contribute to personality differences.

15. Describe one of your personality traits that you believe to be highly heritable and another trait that seems to be much less so. Provide reasons for your answer, and explain why you would expect genetics to exert a greater impact on some personality traits than on others.

16. Mr. Firkin is a shy and reserved person who often feels tense and nervous. In therapy, he recalled that he had an unhappy childhood, feeling that he did not receive enough attention from his mother and resenting the conservative family discipline and lifestyle enforced by his father. He blames both parents for his current anxiety, unhappiness, and loneliness. In light of your understanding of the interactive influences of nature and nurture, explain why Mr. Firkin's complaints about his parents may be somewhat unfair and unhelpful.

17. Bryson is a 14-year-old male who has always been somewhat aggressive. As an infant, he nursed roughly. As a toddler, he played roughly with other children. He has always enjoyed playing with fighting action figures and roughhousing with his father. Now, as a teenager, he spends his time playing video games. He also gets into fights with classmates and constantly argues with his parents. Explain how heredity and environment have worked together, or interacted, to produce his aggressive tendencies.

18. Biological fathers are much less likely than unrelated boyfriends to abuse and murder the children with whom they share a home. Use the principles of evolutionary psychology and natural selection to explain why this is so.

19. The ancient Greek physician Hippocrates correctly located the mind in the
    A) brain.
    B) heart.
    C) stomach.
    D) thyroid gland.

20. Who proposed that phrenology could reveal mental abilities and character traits?
    A) Franz Gall
    B) Plato
    C) Aristotle
    D) Daniel Kish

21. Phrenology highlighted the presumed functions of
    A) specific brain regions.
    B) synaptic gaps.
    C) endorphins.
    D) the myelin sheath.

22. 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.

23. Although phrenology incorrectly suggested that bumps on the skull revealed a person's character traits, phrenology did succeed in focusing attention on
    A) synaptic gaps.
    B) action potentials.
    C) the localization of function.
    D) endorphins.

24. The study of the links between biology and behavior is called
    A) neurology.
    B) cognitive psychology.
    C) endocrinology.
    D) biological psychology.

25. Dr. Wolski conducts research on the relationship between neurotransmitter deficiencies and mood states. Dr. Wolski's research focus is most characteristic of
    A) tomography.
    B) biological psychology.
    C) psychoanalysis.
    D) cognitive psychology.

26. A biological psychologist would be most interested in conducting research on the relationship between
    A) neurotransmitters and depression.
    B) age and bone density.
    C) self-esteem and popularity.
    D) genetics and eye color.

27. We live in a family that resides in a community that is part of a larger society. This demonstrates that we are
    A) biological systems.
    B) impressionable systems.
    C) neurological systems.
    D) biopsychosocial systems.

28. The capacity of a brain area to develop new neural pathways as it adjusts to good and bad experiences is known as
    A) phrenology.
    B) dendrites.
    C) an action potential.
    D) plasticity.

29. Plasticity refers to the brain's capacity to change by forming new neural pathways based on
    A) refractory periods.
    B) localization of function.
    C) experience.
    D) reuptake.

30. Many years of intensive guitar practice have led to changes in Karyasa's motor cortex that enable her skilled finger movements. This best illustrates the value of
    A) reuptake.
    B) echolocation.
    C) plasticity.
    D) localization of function.

31. Blind echolocation experts who can use the brain's visual centers to process auditory signals best illustrate the value of
    A) plasticity.
    B) reuptake.
    C) endorphins.
    D) refractory periods.

32. Neurons are best described as
    A) positively charged sodium and potassium ions.
    B) chemical molecules that cross the synaptic gap.
    C) nerve cells that function as the building blocks of the nervous system.
    D) bundled axon cables that connect the CNS with muscles, glands, and sense organs.

33. The part of the neuron that contains the nucleus is called the
    A) cell body.
    B) dendrite.
    C) axon.
    D) myelin sheath.

34. Dendrites are branching extensions of
    A) neurotransmitters.
    B) endorphins.
    C) neurons.
    D) glial cells.

35. 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 opiate-like chemicals into the brain.

36. 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) a molecule that blocks neurotransmitter receptor sites.
    D) the extension of a neuron that carries messages away from the cell body.

37. Dendrite is to _____ as axon is to _____.
    A) sensory neuron; motor neuron
    B) sodium ion; potassium ion
    C) signal reception; signal transmission
    D) central nervous system; peripheral nervous system

38. 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

39. The longest part of a motor neuron is likely to be the
    A) dendrite.
    B) axon.
    C) cell body.
    D) synapse.

40. A myelin sheath is a
    A) nerve network within the spinal cord that controls physical arousal.
    B) large band of neural fibers connecting the two adrenal glands.
    C) layer of fatty tissue encasing the axons of some nerve cells.
    D) bushy extension of a neuron that conducts impulses toward the cell body.

41. The speed at which a neural impulse travels is increased when the axon is encased by a(n)
    A) endorphin.
    B) myelin sheath.
    C) glial cell.
    D) synaptic vesicle.

42. Degeneration of the myelin sheath results in
    A) reuptake.
    B) multiple sclerosis.
    C) the fight-or-flight response.
    D) an action potential.

43. Gerald has experienced increasing difficulties with muscle weakness, motor coordination, and body balance, which physicians have attributed to multiple sclerosis. These symptoms are most likely to be directly linked with the degeneration of
    A) endorphins.
    B) synaptic gaps.
    C) the pituitary gland.
    D) the myelin sheath.

44. Neurons are surrounded by _____, which guide neural connections and mop up ions and neurotransmitters.
    A) endorphins
    B) glial cells
    C) hormones
    D) agonists

45. One function of glial cells is to
    A) increase the speed of neural impulses.
    B) mimic the effects of neurotransmitters.
    C) provide nutrients to neurons.
    D) stimulate the production of hormones.

46. Which brain cells play a role in learning, thinking, and memory by communicating with neurons?
    A) endorphins
    B) glial cells
    C) agonists
    D) myelin cells

47. 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.

48. Mathematical computations by a computer are faster than your quickest mathematical computations because the top speed of a neural impulse is about _____ times slower than the speed of electricity through the wired circuitry in a computer.
    A) 3 hundred
    B) 3 thousand
    C) 3 hundred thousand
    D) 3 million

49. An ion is a(n)
    A) nerve cell.
    B) layer of fatty tissue that insulates axons and speeds their impulses.
    C) cell that provides nutrients.
    D) electrically charged atom.

50. Neurons generate electricity from a chemical process involving the exchange of
    A) ions.
    B) enzymes.
    C) cortisol.
    D) oxytocin.

51. An action potential is generated by the movement of _____ through an axon membrane.
    A) glial cells
    B) glands
    C) neurotransmitters
    D) ions

52. A resting axon's fluid interior has a mostly negative charge thanks to the presence of large _____ ions.
    A) sodium
    B) serotonin
    C) protein
    D) dopamine

53. A resting axon's fluid interior contains both large, negatively charged _____ ions and smaller, positively charged _____ ions.
    A) potassium; sodium
    B) sodium; protein
    C) potassium; protein
    D) protein; potassium

54. The resting potential of an axon results from the fact that the axon's surface is
    A) encased by a myelin sheath.
    B) selectively permeable.
    C) sensitive to neurotransmitter molecules.
    D) part of a larger neural network.

55. A state in which the fluid outside an axon has a mostly positive charge and the fluid inside the axon has a mostly negative charge is called
    A) the action potential.
    B) the resting potential.
    C) the refractory period.
    D) depolarization.

56. The fact that only positively charged sodium ions enter the neuron when it fires demonstrates that neurons are
    A) resting.
    B) selectively permeable.
    C) depolarized.
    D) inhibitory.

57. The depolarization of a neural membrane creates a(n)
    A) action potential.
    B) myelin sheath.
    C) neural network.
    D) interneuron.

58. The loss of the inside/outside electrical charge difference is called
    A) selectively permeable.
    B) a resting potential.
    C) depolarization.
    D) an action potential.

59. An action potential involves the temporary _____ through an axon membrane.
    A) inflow of positively charged ions
    B) inflow of negatively charged ions
    C) outflow of positively charged ions
    D) outflow of negatively charged ions

60. An action potential would be triggered if neuron stimulation caused the electrical charge to go above which threshold?
    A) +40 mV
    B) –55 mV
    C) –70 mV
    D) +20 mV

61. As positively charged sodium ions enter the axon, _____ flow(s) out to repolarize part of the axon.
    A) the action potential
    B) potassium ions
    C) a neural impulse
    D) glial cells

62. Following depolarization, the sodium/potassium pump transports _____ ions _____ a neuron.
    A) positively charged; into
    B) negatively charged; into
    C) positively charged; out of
    D) negatively charged; out of

63. An electrical current traveling down a wire is to _____ as an electrical current not moving is to _____.
    A) excitatory; inhibitory
    B) action potential; resting potential
    C) inhibitory; excitatory
    D) resting potential; action potential

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

65. Excitatory signals to a neuron must exceed inhibitory signals by a minimum intensity in order to trigger
    A) reuptake.
    B) a refractory period.
    C) an action potential.
    D) selective permeability.

66. If the _____ occurs at an electrical charge of about –70 millivolts, the _____ is most likely to occur at a charge of about +40 millivolts.
    A) action potential; resting potential
    B) resting potential; threshold
    C) threshold; resting potential
    D) resting potential; action potential

67. With regard to the process of neural transmission, a refractory period refers to a time interval in which
    A) chemical messengers cross synaptic gaps between neurons.
    B) a neurotransmitter is reabsorbed by a sending neuron.
    C) an action potential cannot occur.
    D) an organism reflexively withdraws from a pain stimulus.

68. 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 a refractory period.
    C) an all-or-none response.
    D) dependent on neurotransmitter molecules.

69. A neuron's reaction of either firing at full strength or not firing at all is described as
    A) an all-or-none response.
    B) a refractory period.
    C) the resting potential.
    D) a reflexive response.

70. 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.

71. 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) antagonists.
    B) synaptic gaps.
    C) interneurons.
    D) neural networks.

72. 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.

73. The axon of a sending neuron is separated from the dendrite of a receiving neuron by a
    A) myelin sheath.
    B) neural network.
    C) glial cell.
    D) synaptic gap.

74. When an action potential reaches the end of an axon, an electrical impulse is then converted into a
    A) myelin sheath.
    B) reflexive response.
    C) chemical message.
    D) glial cell.

75. Neuron-produced chemicals that carry messages to other neurons or to muscles and glands are called
    A) synapses.
    B) interneurons.
    C) dendrites.
    D) neurotransmitters.

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

77. Neurotransmitters are released from knob-like terminals at the end of the
    A) dendrites.
    B) cell body.
    C) axon.
    D) myelin sheath.

78. 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.

79. The number of neurotransmitter molecules located within a specific synaptic gap would most clearly be reduced by
    A) an action potential.
    B) ACh-producing neurons.
    C) acupuncture.
    D) reuptake.

80. Which neurotransmitter plays the most direct role in learning and memory?
    A) dopamine
    B) acetylcholine
    C) GABA
    D) oxytocin

81. Acetylcholine is a neurotransmitter that
    A) causes sleepiness.
    B) lessens physical pain.
    C) reduces depressed moods.
    D) triggers muscle contractions.

82. Endorphins are
    A) neurotransmitters.
    B) sex hormones.
    C) endocrine glands.
    D) glial cells.

83. 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.

84. The “runner's high” can be explained by the release of
    A) agonists.
    B) neurons.
    C) endorphins.
    D) antagonists.

85. Carla has been doing aerobic exercise daily for over three years. The release of _____ can help explain why she feels good after exercising.
    A) agonists
    B) neurons
    C) endorphins
    D) antagonists

86. Sophia has taken an opiate drug that makes her feel “high” by increasing her normal sensation of pleasure. The drug she took was a(n)
    A) acetylcholine.
    B) endorphin.
    C) agonist.
    D) antagonist.

87. Opiate drugs occupy the same receptor sites as
    A) serotonin.
    B) endorphins.
    C) dopamine.
    D) epinephrine.

88. Which of the following is an opiate that elevates mood and eases pain?
    A) dopamine
    B) acetylcholine
    C) morphine
    D) glutamate

89. Opiate drugs _____ neural activity and temporarily _____ pain and anxiety.
    A) depress; increase
    B) accelerate; decrease
    C) depress; decrease
    D) accelerate; increase

90. 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.

91. Jason's intensely uncomfortable withdrawal symptoms following heroin use were probably due in part to a reduction of his body's normal production of
    A) dopamine.
    B) epinephrine.
    C) acetylcholine.
    D) endorphins.

92. A drug molecule that increases a neurotransmitter's action is called a(n)
    A) antagonist.
    B) endorphin.
    C) agonist.
    D) steroid.

93. Any drug molecule that blocks the reuptake of a neurotransmitter is a(n)
    A) steroid.
    B) agonist.
    C) endorphin.
    D) antagonist.

94. Any drug molecule that occupies a neurotransmitter receptor site and blocks the neurotransmitter's effect is a(n)
    A) glutamate.
    B) agonist.
    C) opiate.
    D) antagonist.

95. 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

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

97. Madison is experiencing symptoms of paralysis after eating food contaminated by botulin. Her paralysis is most likely to be relieved by a drug that functions as a(n)
    A) ACh agonist.
    B) serotonin agonist.
    C) ACh antagonist.
    D) serotonin antagonist.

98. Which neurotransmitter influences movement, learning, attention, and emotion?
    A) ACh
    B) dopamine
    C) serotonin
    D) GABA

99. Mr. Anderson suffers from Parkinson's disease and his shaking arm movements are so severe that he has difficulty feeding or dressing himself without help. His symptoms are most likely to be linked with an undersupply of the neurotransmitter
    A) cortisol.
    B) dopamine.
    C) serotonin.
    D) oxytocin.

100. Schizophrenia is most closely linked to an oversupply of the neurotransmitter
    A) dopamine.
    B) epinephrine.
    C) acetylcholine.
    D) serotonin.

101. An undersupply of serotonin is most closely linked to
    A) Alzheimer's disease.
    B) schizophrenia.
    C) Parkinson's disease.
    D) depression.

102. An undersupply of the major inhibitory neurotransmitter known as _____ is linked to seizures.
    A) glutamate
    B) GABA
    C) serotonin
    D) ACh

103. Jacob's severe migraine headaches have led him to seek medical help. It is likely that his symptoms are most closely linked to an
    A) oversupply of GABA.
    B) undersupply of serotonin.
    C) oversupply of glutamate.
    D) undersupply of acetylcholine.

104. The nervous system is the
    A) complete set of glands that secrete hormones into the bloodstream.
    B) collection of bundled axons that form neural cables carrying information to body muscles.
    C) an organism's complete set of automatic reflex responses.
    D) electrochemical communication network that includes all the body's neurons.

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

106. 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.

107. Which nervous system is responsible for gathering information and transmitting decisions from the CNS to other parts of the body?
    A) sympathetic nervous system
    B) peripheral nervous system
    C) somatic nervous system
    D) autonomic nervous system

108. Information travels through axons that are bundled into the cables we call
    A) interneurons.
    B) action potentials.
    C) nerves.
    D) reflex pathways.

109. You feel the pain of a sprained ankle when _____ relay(s) messages from your ankle to your central nervous system.
    A) the myelin sheath
    B) interneurons
    C) motor neurons
    D) sensory neurons

110. Sensory neurons are located in the
    A) synaptic gaps.
    B) endocrine system.
    C) peripheral nervous system.
    D) myelin sheath.

111. Sensory neurons are _____ neurons, and motor neurons are _____ neurons.
    A) agonist; antagonist
    B) afferent; efferent
    C) antagonist; agonist
    D) efferent; afferent

112. Information is carried from the central nervous system to the body's tissues by
    A) interneurons.
    B) sensory neurons.
    C) motor neurons.
    D) adrenal glands.

113. Some neurons enable you to grasp objects by relaying outgoing messages to the muscles in your arms and hands. These neurons are called
    A) interneurons.
    B) sensory neurons.
    C) neurotransmitters.
    D) motor neurons.

114. Motor neurons transmit signals to
    A) glands.
    B) interneurons.
    C) sensory neurons.
    D) all of these parts.

115. Thomas is playing soccer. Instructions about where and how to move are carried from his CNS to his muscles by
    A) the myelin sheath.
    B) interneurons.
    C) motor neurons.
    D) sensory neurons.

116. Neurons that function within the brain and spinal cord are called
    A) sensory neurons.
    B) interneurons.
    C) endorphins.
    D) motor neurons.

117. Central nervous system neurons that process information between sensory inputs and motor outputs are called
    A) neurotransmitters.
    B) interneurons.
    C) synapses.
    D) dendrites.

118. The two divisions of the peripheral nervous system are the
    A) brain and spinal cord.
    B) sympathetic nervous system and parasympathetic nervous system.
    C) endocrine system and circulatory system.
    D) somatic nervous system and the autonomic nervous system.

119. The somatic nervous system is a component of the _____ nervous system.
    A) peripheral
    B) central
    C) sympathetic
    D) parasympathetic

120. Messages are transmitted from your spinal cord to muscles in your hands by the _____ nervous system.
    A) somatic
    B) parasympathetic
    C) sympathetic
    D) autonomic

121. The part of the peripheral nervous system that controls the movements of your mouth and jaws as you eat is called the
    A) somatic nervous system.
    B) sympathetic nervous system.
    C) endocrine system.
    D) autonomic nervous system.

122. 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) endocrine system.
    C) sensory nervous system.
    D) autonomic nervous system.

123. Messages are transmitted from your spinal cord to your heart muscles by the
    A) sensory nervous system.
    B) somatic nervous system.
    C) central nervous system.
    D) autonomic nervous system.

124. Which division of the autonomic nervous system arouses the body and mobilizes its energy in stressful situations?
    A) the parasympathetic nervous system
    B) the sympathetic nervous system
    C) the somatic nervous system
    D) the central nervous system

125. 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 nervous system.

126. 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.

127. 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) sensory nervous system.

128. An accelerated heartbeat is to a slowed heartbeat as the _____ nervous system is to the _____ nervous system.
    A) somatic; autonomic
    B) autonomic; somatic
    C) sympathetic; parasympathetic
    D) parasympathetic; sympathetic

129. The sympathetic and parasympathetic nervous systems work together to keep you in a steady internal state called
    A) depolarization.
    B) reuptake.
    C) homeostasis.
    D) the resting potential.

130. 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.

131. The strengthening of the brain's synaptic connections facilitates the formation of
    A) interneurons.
    B) endorphins.
    C) neural networks.
    D) glial cells.

132. 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) acetylcholine antagonists.

133. 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) myelin sheath.

134. The part of the _____ that carries information from your senses to your brain and motor-control information to your body parts is the spinal cord.
A) central nervous system
B) peripheral nervous system
C) parasympathetic nervous system
D) somatic nervous system

135. A simple, automatic, inborn response to a sensory stimulus is called a(n)
A) neural network.
B) action potential.
C) neurotransmitter.
D) reflex.

136. The knee-jerk reflex is controlled by interneurons in the
A) synaptic gap.
B) spinal cord.
C) sympathetic nervous system.
D) parasympathetic nervous system.

137. 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) autonomic nervous system.
C) sympathetic nervous system.
D) central nervous system.

138. 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) botulin poisoning.
    B) a severed spinal cord.
    C) a sympathetic nervous system injury.
    D) a refractory period.

139. The endocrine system consists of the
    A) communication network that includes all the body's neurons.
    B) regions of the brain that regulate emotion.
    C) interneurons within the spinal cord.
    D) glands that secrete hormones.

140. Hormones are the chemical messengers of the
    A) autonomic nervous system.
    B) somatic nervous system.
    C) endocrine system.
    D) central nervous system.

141. The _____ is similar to the nervous system in that both produce molecules that act on receptors elsewhere in the body.
    A) central nervous system
    B) endocrine system
    C) peripheral nervous system
    D) autonomic nervous system

142. The speedy nervous system zips messages by way of neurotransmitters. Endocrine messages, however, are delivered more slowly because hormones travel through
    A) myelinated neurons.
    B) the bloodstream.
    C) glial cells.
    D) interneurons.

143. Stacey and her boyfriend had a fight earlier in the day. Although they made up after the fight, Stacey still feels angry hours later. Why is this?
    A) Central nervous system messages last an extended period.
    B) Peripheral nervous system messages last an extended period.
    C) Endocrine system messages last an extended period.
    D) Parasympathetic nervous system messages last an extended period.

144. The ovaries in females and the testes in males are part of the
    A) somatic nervous system.
    B) endocrine system.
    C) autonomic nervous system.
    D) central nervous system.

145. The release of hormones by the adrenal glands is most likely to trigger
    A) depression.
    B) the fight-or-flight response.
    C) the pain reflex.
    D) a refractory period.

146. 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

147. The release of epinephrine into the bloodstream is most likely to
    A) increase blood sugar.
    B) lower blood pressure.
    C) stimulate digestion.
    D) decrease perspiration.

148. A growth hormone that stimulates physical development is released by the
    A) adrenal glands.
    B) pituitary gland.
    C) parathyroids.
    D) pancreas.

149. 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.

150. Kendra and several classmates are studying for an upcoming exam. As they talk, the level of oxytocin in Kendra's bloodstream begins to rise. This is most likely to lead Kendra to experience increased feelings of social
    A) irritation.
    B) envy.
    C) bonding.
    D) anxiety.

151. Oxytocin is secreted by the
    A) pancreas.
    B) thyroid gland.
    C) pituitary gland.
    D) adrenal gland.

152. The hypothalamus influences the _____ to send messages to the _____.
    A) adrenal glands; pancreas
    B) pituitary; endocrine glands
    C) motor neurons; sensory neurons
    D) somatic nervous system; autonomic nervous system

153. The master gland of the endocrine system is the
    A) thyroid gland.
    B) adrenal gland.
    C) pituitary gland.
    D) pancreas.

154. The pituitary gland is referred to as the *master gland* because it
    A) directs other endocrine glands to release their hormones.
    B) directs the hypothalamus to release its hormones.
    C) is directed by the hypothalamus.
    D) directs other adrenal glands to release their hormones.

155. Surgical destruction of brain tissue is called a(n)
    A) EEG.
    B) diffusion spectrum.
    C) lesion.
    D) MRI.

156. Brad's doctor has discovered some defective cells in Brad's brain and his doctor has destroyed some of them. Which technique did the doctor use?
    A) lesion
    B) EEG
    C) MEG
    D) PET

157. 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.

158. Cassie is participating in a study in which she completes tasks while wearing a shower-cap-like hat that is filled with electrodes covered with a conductive gel. Which brain imaging technique is being used?
    A) lesion
    B) EEG
    C) MEG
    D) PET

159. Which technique measures magnetic fields from the brain's natural electrical activity?
    A) lesion
    B) PET
    C) EEG
    D) MEG

160. By measuring magnetic fields from the brain's natural electrical activity, researchers are able to understand how certain tasks are related to brain activity in certain areas. This technique is called a(n)
    A) EEG.
    B) MEG.
    C) PET.
    D) MRI.

161. James just left his physician's office where he underwent a brain scan that measured the magnetic fields from his brain's neural electrical activity. Which brain scan was this?
    A) lesion
    B) EEG
    C) MEG
    D) PET

162. The release of gamma waves from radioactive blood sugar in different regions of the brain is detected by a(n)
    A) MRI.
    B) EEG.
    C) PET scan.
    D) fMRI.

163. 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) fMRI.
    B) PET scan.
    C) EEG.
    D) MRI.

164. Magnetic resonance imaging uses magnetic fields and _____ to produce computer-generated images of soft tissue.
    A) radio waves
    B) brain lesions
    C) a radioactive form of glucose
    D) electrodes placed on the scalp

165. To detect Mr. Ziegler's loss of brain tissue from a degenerative disease, his physicians are most likely to request that he receive a(n)
    A) EEG.
    B) MRI.
    C) brain lesion.
    D) PET scan.

166. Fluid-filled brain areas are called
    A) ventricles.
    B) pons.
    C) the cerebellum.
    D) lesions.

167. 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.

168. 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) microelectrode insertion.
    C) MRI.
    D) brain lesion.

169. Zack's doctor performed a test to reveal both the function and structure of his brain. Which brain scan was used?
    A) lesion
    B) EEG
    C) fMRI
    D) PET scan

170. _____ promises $1 billion for brain computer modeling.
    A) The Brain Code Project
    B) Europe's Human Brain Project
    C) The PsychENCODE project
    D) The Human Connectome Project

171. The _____ project enables researchers to examine differences between the brains of healthy people and those with various disorders.
    A) MEG
    B) diffusion spectrum imaging
    C) PsychENCODE
    D) MRI

172. The $40 million Human Connectome Project harnesses _____ technology to map neural connections across long distances within the brain.
    A) positron emission tomography
    B) electroencephalogram
    C) diffusion spectrum imaging
    D) microelectrode insertion

173. Human brain complexity arises from new systems built on top of older ones. The remnants of humanity's most distant past involve components of the
    A) amygdala.
    B) hippocampus.
    C) brainstem.
    D) hypothalamus.

174. Basic automatic survival functions, such as heartbeat and breathing, are controlled by the
    A) pons.
    B) brainstem.
    C) thalamus.
    D) reticular formation.

175. The part of the brainstem that controls heartbeat and breathing is called the
    A) cerebellum.
    B) medulla.
    C) amygdala.
    D) thalamus.

176. The part of the brainstem that helps to coordinate movements is called the
    A) nucleus accumbens.
    B) hippocampus.
    C) amygdala.
    D) pons.

177. 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) hypothalamus

178. The brain structure that acts as a sensory control center is the
    A) medulla.
    B) cerebellum.
    C) thalamus.
    D) hippocampus.

179. Which brain structure receives information from all the senses except smell?
    A) hippocampus
    B) amygdala
    C) pons
    D) thalamus

180. Jason lost his sense of taste because a tumor caused damage to a structure located on top of his brainstem. This structure is known as the
    A) amygdala.
    B) thalamus.
    C) medulla.
    D) hippocampus.

181. Information from higher brain regions is transmitted to the medulla and to the cerebellum through the
    A) hypothalamus.
    B) hippocampus.
    C) amygdala.
    D) thalamus.

182. The reticular formation is a nerve network that travels through the _____ into the thalamus.
    A) brainstem
    B) amygdala
    C) hypothalamus
    D) cerebellum

183. Which region of your brainstem plays a role in arousing you to a state of alertness when, for example, you accidentally stumble over another person's misplaced pair of shoes?
    A) reticular formation
    B) hypothalamus
    C) amygdala
    D) hippocampus

184. Jessica is cooking dinner while studying for her upcoming class exam. Which brain area is involved in this multitasking?
    A) reticular formation
    B) medulla
    C) pons
    D) cerebellum

185. 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.

186. The _____ at the back of the brain enables nonverbal learning and skill memory.
    A) amygdala
    B) cerebellum
    C) hypothalamus
    D) nucleus accumbens

187. Which baseball-sized structure at the rear of the brainstem serves many functions, including helping you to judge time and to discriminate sounds and textures?
    A) amygdala
    B) cerebellum
    C) hippocampus
    D) basal ganglia

188. With assistance from the _____, the cerebellum _____.
    A) hypothalamus; regulates hunger and thirst
    B) amygdala; controls heartbeat and breathing
    C) pons; coordinates voluntary movement
    D) medulla; controls fear and rage

189. 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.

190. A neural system at the border between the brainstem and the cerebral hemispheres is known as the
    A) pons.
    B) limbic system.
    C) reticular formation.
    D) medulla.

191. The sequence of brain regions from the 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.

192. The amygdala consists of emotion-linked neural clusters in the
    A) brainstem.
    B) reticular formation.
    C) limbic system.
    D) cerebellum.

193. S. M. is a patient who has been called “the woman with no fear,” even of being threatened with a gun. Her fearlessness is best attributed to damage to her
    A) pons.
    B) cerebellum.
    C) hypothalamus.
    D) amygdala.

194. The amygdala is responsible for the regulation of
    A) survival mechanisms.
    B) hunger.
    C) balance.
    D) emotion.

195. 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.

196. Carla is home alone when she hears someone trying to open her front door. She is immediately frightened. Which brain area is involved in her emotional response?
    A) amygdala
    B) hypothalamus
    C) medulla
    D) hippocampus

197. Which limbic system structure regulates thirst and body temperature?
    A) medulla
    B) amygdala
    C) hippocampus
    D) hypothalamus

198. 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.

199. As John thinks about having sex with his girlfriend, his hypothalamus secretes hormones that trigger the pituitary gland to
    A) influence the hippocampus to release hormones.
    B) activate a reward deficiency syndrome.
    C) activate his cerebellum.
    D) influence his sex glands to release their hormones.

200. 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.

201. James Olds and Peter Milner located reward centers in the brain structure known as the
    A) hypothalamus.
    B) cerebellum.
    C) medulla.
    D) amygdala.

202. A limbic system reward center located in front of the hypothalamus is called the
    A) amygdala.
    B) reticular formation.
    C) pons.
    D) nucleus accumbens.

203. Our pleasurable "chills" response to a favorite piece of music is facilitated by the release of the neurotransmitter
    A) GABA.
    B) cortisol.
    C) ACh.
    D) dopamine.

204. Addictive disorders may stem from malfunctioning reward centers in the
    A) thalamus.
    B) cerebellum.
    C) reticular formation.
    D) limbic system.

205. Some researchers believe that a reward deficiency syndrome contributes to
    A) schizophrenia.
    B) amygdala lesions.
    C) muscular paralysis.
    D) substance use disorders.

206. The neural center in the limbic system that processes explicit memories for storage is called the
    A) hypothalamus.
    B) thalamus.
    C) hippocampus.
    D) medulla.

207. Those who survive a hippocampal brain tumor in childhood are likely to have difficulty _____ in adulthood.
    A) getting adequate sleep
    B) remembering new information
    C) maintaining body balance while walking
    D) experiencing feelings of fear

208. After experiencing a series of head injuries while playing professional football, Arie has begun to struggle with remembering the names of friends and even family members. His memory difficulties are most likely to be due to damage to his
    A) hippocampus.
    B) medulla.
    C) amygdala.
    D) hypothalamus.

209. About 85 percent of human brain weight comes from the
    A) hippocampus.
    B) cerebrum.
    C) corpus callosum.
    D) frontal lobes.

210. The cerebral cortex is the covering layer of the
    A) brainstem.
    B) corpus callosum.
    C) hippocampus.
    D) cerebrum.

211. The brain's thin surface layer, which serves as your body's ultimate information-processing center, is the
    A) hippocampus.
    B) amygdala.
    C) corpus callosum.
    D) cerebral cortex.

212. Your conscious awareness of your own name and self-identity depends primarily on the normal functioning of your
    A) somatosensory cortex.
    B) amygdala.
    C) motor cortex.
    D) cerebral cortex.

213. What is it about humans that allows us to adapt to our ever-changing environment?
    A) our larger cortex
    B) our frontal lobe
    C) our motor cortex
    D) our association areas

214. Which portion of the cerebral cortex lies directly behind the forehead and is involved in speaking, muscle movements, and making plans?
    A) temporal lobes
    B) frontal lobes
    C) parietal lobes
    D) occipital lobes

215. Which portion of the cerebral cortex is most closely adjacent to the ears?
    A) parietal lobes
    B) temporal lobes
    C) occipital lobes
    D) frontal lobes

216. Which portion of the cerebral cortex is located nearest the top of the head just behind the frontal lobes?
    A) occipital lobes
    B) hippocampus
    C) parietal lobes
    D) temporal lobes

217. 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

218. Applying mild electrical stimulation to parts of an animal's cortex, Gustav Fritsch and Eduard Hitzig discovered what is now called the
    A) motor cortex.
    B) visual cortex.
    C) auditory cortex.
    D) somatosensory cortex.

219. The motor cortex is
    A) an area at the rear of the frontal lobes that controls voluntary movements.
    B) an area at the front of the parietal lobes that registers and processes body touch and movement sensations.
    C) areas of the cerebral cortex that are not involved in primary motor or sensory functions.
    D) the portion of the cerebral cortex lying at the back of the head.

220. The motor cortex is located in the _____ lobes.
    A) occipital
    B) temporal
    C) frontal
    D) parietal

221. 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

222. During open-brain surgery, Adam's left ankle twitched whenever the surgeon electrically stimulated a specific area within Adam's
    A) left frontal lobe.
    B) right frontal lobe.
    C) left parietal lobe.
    D) right parietal lobe.

223. Margaret had a stroke that damaged the right side of her brain. Yet, she has difficulty moving her left arm, not her right arm. This indicates that the
    A) somatosensory cortex is responsible for phantom limb movements.
    B) motor cortex on the right side of the brain controls movements of specific body parts on the right side of the body.
    C) association areas of the brain control movements of all body parts.
    D) motor cortex on the right side of the brain controls movements of specific body parts on the opposite side of the body.

224. Stimulating the right side of the brain will cause movement on the left side of the body. This indicates that the
    A) somatosensory cortex is responsible for phantom limb movements.
    B) motor cortex on the right side of the brain controls movements of specific body parts on the right side of the body.
    C) association areas of the brain control movements of all body parts.
    D) motor cortex on the right side of the brain controls movements of specific body parts on the opposite side of the body.

225. Who mapped the motor cortex during the 1930s?
    A) de Courten-Myers
    B) Foerster and Penfield
    C) Fritsch and Hitzig
    D) Delgado and Gibbs

226. 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

227. In a clinical trial of brain-implanted microelectrodes, a paralyzed 25-year-old man constructed shapes on a computer screen by activating neurons in his
    A) somatosensory cortex.
    B) occipital lobes.
    C) motor cortex.
    D) hippocampus.

228. Which part of the brain specializes in receiving information from the skin senses and from the movement of body parts?
    A) motor cortex
    B) frontal lobes
    C) somatosensory cortex
    D) association areas

229. The somatosensory cortex is most critical for our sense of
    A) sight.
    B) hearing.
    C) touch.
    D) smell.

230. Which part of your brain is essential for receiving information that you are moving your legs?
    A) corpus callosum
    B) hippocampus
    C) somatosensory cortex
    D) temporal lobes

231. Which of the following body parts is associated with the greatest amount of brain tissue in the somatosensory cortex?
    A) toes
    B) knees
    C) neck
    D) lips

232. Falsely hearing a sound in the absence of any external stimulus is called
    A) neurogenesis.
    B) a split-brain condition.
    C) a hallucination.
    D) an fMRI.

233. 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

234. 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.

235. Auditory stimulation is processed in the _____ lobes.
    A) occipital
    B) temporal
    C) frontal
    D) parietal

236. The auditory hallucinations experienced by people with schizophrenia are most closely linked with the activation of areas in their
    A) motor cortex.
    B) parietal lobes.
    C) temporal lobes.
    D) somatosensory cortex.

237. The association areas are located in the
    A) brainstem.
    B) thalamus.
    C) hippocampus.
    D) cerebral cortex.

238. The most extensive regions of the brain are involved in higher mental functions such as memory and reasoning. These regions are called the
    A) somatosensory cortex.
    B) hippocampus.
    C) corpus callosum.
    D) association areas.

239. 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) amygdala.
    B) somatosensory cortex.
    C) motor cortex.
    D) association areas.

240. Knowing that you will be punished for breaking Mom's favorite dish is a function of the
    A) somatosensory cortex.
    B) corpus callosum.
    C) association areas.
    D) motor cortex.

241. The fact that the ability to interpret and integrate sensory information with stored memories is lost following damage to the _____ disconfirms the claim that we really use only 10 percent of our brain.
    A) motor cortex
    B) amygdala
    C) hypothalamus
    D) association areas

242. Which of the following is NOT true of the brain's association areas?
    A) More intelligent animals have larger association areas.
    B) Lower-level species have smaller association areas.
    C) The association areas link sensory information with stored memories.
    D) More intelligent animals have smaller association areas.

243. Which of the following would have the largest motor areas in the brain?
    A) a rat
    B) a chimpanzee
    C) a dog
    D) a human

244. John and Samantha are studying for their upcoming psychology class when John states, "I wonder what it would be like if we used all of our brain, instead of only 10 percent of it." Which of the following would be the best response by Samantha?
    A) "I completely agree. It is similar to how humans use lungs. We use only 20 percent of our lungs."
    B) "Scientists may never know how much of our brain we actually use."
    C) "I know. It is amazing. There is a 90 percent chance that head trauma would not impact parts of the brain that we actually use."
    D) "That is actually a myth. We use all of our brain."

245. Which of the following brain areas enables judgment, planning, social interactions, and processing of new memories?
    A) frontal lobes
    B) prefrontal cortex
    C) temporal lobes
    D) parietal lobes

246. The classic case of railroad worker Phineas Gage best illustrated that frontal lobe damage can
    A) trigger muscle spasms.
    B) enhance moral reasoning skills.
    C) alter one's personality.
    D) facilitate neurogenesis.

247. Cecil Clayton displayed increased impulsivity and lowered intelligence test performance following damage to his left _____ lobe in a sawmill accident.
    A) parietal
    B) occipital
    C) frontal
    D) temporal

248. Those with damage to the _____ lobes are often untroubled by the ethical dilemma of choosing to push one person in front of a runaway trolley in order to save five others.
    A) temporal
    B) occipital
    C) parietal
    D) frontal

249. Mathematical and spatial reasoning capacities are especially likely to be linked with association areas in the
    A) parietal lobes.
    B) temporal lobes.
    C) occipital lobes.
    D) frontal lobes.

250. 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

251. Janet is planning a birthday party for her friend. This behavior is regulated by her
    A) frontal lobes.
    B) occipital lobes.
    C) parietal lobes.
    D) temporal lobes.

252. Marcy is a returning college student. She took 10 years off when she had her first child and is now finishing course requirements for her bachelor's degree. She has noticed that many of her classmates are much younger than she is and that they miss many classes and talk about “partying” frequently. This may be because their _____ are not yet completely developed.
A) frontal lobes
B) occipital lobes
C) parietal lobes
D) temporal lobes

253. Dr. Rapport conducts research to better understand how different regions of the brain work together. He is also interested in the causes of psychological disorders. Which of the following techniques is he likely to implement in his research?
A) analyses of functional connectivity
B) cortex mapping
C) neurogenesis
D) splitting the corpus callosum

254. Although James lost some manual dexterity following brain damage from a stroke, the development of new neural pathways enabled him to regain most of his lost agility. This best illustrates the value of
A) neurogenesis.
B) lateralization.
C) plasticity.
D) brain fissures.

255. 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.

256. Areas of the visual cortex that normally help people to see may aid blind people to read Braille by processing tactile sensations from the fingers. This best illustrates the value of
A) plasticity.
B) brain fissures.
C) lateralization.
D) neurogenesis.

257. If a slow-growing left-hemisphere tumor disrupts language, the right hemisphere may take over this language functioning. This best illustrates the value of
    A) the split brain.
    B) neurogenesis.
    C) brain fissures.
    D) plasticity.

258. Among deaf people, a temporal lobe area normally dedicated to hearing may begin to process visual signals. This best illustrates the impact of
    A) plasticity.
    B) neurogenesis.
    C) lateralization.
    D) brain fissures.

259. Terri suffered brain damage as a result of a serious car accident when she was only 13 months old. Fortunately, her brain recovered because _____ is strongest in early childhood.
    A) cerebral cortex maturation
    B) plasticity
    C) folding of the four lobes
    D) localization of simple brain functions

260. After Clark's hand had been amputated, he gradually began to feel sensations on his nonexistent fingers when his arm was stroked. This best illustrates the consequences of
    A) neurogenesis.
    B) plasticity.
    C) lateralization.
    D) the split brain.

261. The process of forming new neurons within the brain is called
    A) lateralization.
    B) hemispherectomy.
    C) neurogenesis.
    D) plasticity.

262. There is some hope that _____ discovered in the human embryo can someday be used to generate replacements for damaged neurons in the brain.
    A) gene fragments
    B) somatosensory neurons
    C) optic nerves
    D) stem cells

263. Physical exercise, sleep, and exposure to nonstressful but stimulating environments are most likely to promote
    A) lateralization.
    B) neurogenesis.
    C) hemispherectomy.
    D) new brain fissures.

264. A tendency for the brain's left and right hemispheres to serve different functions is called
    A) hemispherectomy.
    B) lateralization.
    C) neurogenesis.
    D) plasticity.

265. The control of speech production by the left rather than the right hemisphere of the brain best illustrates
    A) neurogenesis.
    B) lateralization.
    C) brain fissures.
    D) plasticity.

266. 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.

267. 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) sends information from the left half of your field of vision to your right cerebral hemisphere.
    D) transfers neural impulses from the somatosensory cortex to the motor cortex.

268. Those whose corpus callosum is surgically severed are said to be patients with
    A) brain plasticity.
    B) brain fissures.
    C) neurogenesis.
    D) split brains.

269. Neurosurgeons have severed the corpus callosum in human patients in order to reduce
    A) lateralization.
    B) epileptic seizures.
    C) neural plasticity.
    D) neurogenesis.

270. Sensory information is transmitted from the _____ visual field of _____ to the left cerebral hemisphere.
    A) left; only the left eye
    B) right; only the right eye
    C) left; only the right eye
    D) right; both the right and left eyes

271. 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.

272. The ability to simultaneously copy different figures with the right and left hand is most characteristic of those whose _____ has been cut.
    A) somatosensory cortex
    B) hippocampus
    C) corpus callosum
    D) motor cortex

273. When a person speaks, brain waves and blood flow are especially likely to reveal increased activity in the
    A) cerebellum.
    B) left hemisphere.
    C) hippocampus.
    D) right hemisphere.

274. When Iona does her math homework, which area of her brain is most active?
    A) her amygdala
    B) her left hemisphere
    C) her temporal lobe
    D) her right hemisphere

275. Deaf people who use sign language typically
    A) demonstrate greater mathematical competence than hearing persons.
    B) process language in their left cerebral hemisphere.
    C) have better communication skills than hearing persons.
    D) have a smaller corpus callosum than hearing persons.

276. People who suffer partial paralysis as a result of damage to the _____will sometimes obstinately claim they can move a paralyzed limb.
    A) right cerebral hemisphere
    B) corpus callosum
    C) left cerebral hemisphere
    D) occipital lobes

277. Nongenetic influences are known as
    A) environmental influences.
    B) biological influences.
    C) heredity.
    D) behavior genetics.

278. Every nongenetic influence, from prenatal nutrition to the people and things around us, is an aspect of our
    A) natural selection.
    B) genome.
    C) environment.
    D) heredity.

279. The impact of our cultural backgrounds on the development of our personal values best illustrates the influence of
    A) our shared human genome.
    B) epigenetic marks.
    C) natural selection.
    D) the environment.

280. You are curious about why you are who you are. Thinking about your life thus far, which of the following would be an environmental influence on your development?
    A) your eye color
    B) your height
    C) your chromosomes
    D) your elementary school

281. Characteristics that are genetically transferred from parents to their offspring are said to be a product of
    A) epigenetics.
    B) heredity.
    C) shared family environments.
    D) behavior genetics.

282. The study of the relative power and limits of genetic and environmental influences on behavior is known as
    A) genomics.
    B) epigenetics.
    C) behavior genetics.
    D) evolutionary psychology.

283. A behavior geneticist would be most interested in studying hereditary influences on
    A) skin color.
    B) sexual anatomy.
    C) physical attractiveness.
    D) personality traits.

284. A human sperm cell contains
    A) 23 chromosomes.
    B) 23 genes.
    C) 46 chromosomes.
    D) 46 genes.

285. Chromosomes are threadlike structures made of
    A) serotonin molecules.
    B) epigenetic molecules.
    C) DNA molecules.
    D) dizygotic molecules.

286. Chromosomes are contained within
    A) brain cells.
    B) sperm cells.
    C) blood cells.
    D) all of these types of cells.

287. DNA is a complex
    A) sex hormone.
    B) genome.
    C) molecule.
    D) epigenetic mark.

288. The biochemical units of heredity that make up the chromosomes are called
    A) genes.
    B) genomes.
    C) epigenetic molecules.
    D) neurotransmitters.

289. A segment of DNA that provides the code for creating protein molecules is called a(n)
    A) organic methyl molecule.
    B) epigenetic mark.
    C) chromosome.
    D) gene.

290. Environmental events can “turn on” genes, ensuring that they are
    A) expressed.
    B) inactive.
    C) dormant.
    D) permitted.

291. Depending on environmental conditions, specific genes can be either
    A) monozygotic or dizygotic.
    B) active or inactive.
    C) identical or fraternal.
    D) structured or unstructured.

292. The biochemical code for eye color is transmitted from parents to offspring by
    A) neurotransmitters.
    B) natural selection.
    C) epigenetic molecules.
    D) genes.

293. Which of the following is considered the body's building blocks?
    A) protein molecules
    B) chromosomes
    C) DNA
    D) genes

294. The genome refers to an organism's complete set of
    A) epigenetic marks.
    B) genetic material.
    C) protein molecules.
    D) zygotic cells.

295. Twin and adoption studies have been most helpful for teasing apart the influences of
    A) genetic mutations and epigenetic marks.
    B) extraversion and neuroticism.
    C) genes and protein molecules.
    D) heredity and environment.

296. Identical twins originate from the fertilization of
    A) a single egg cell by a single sperm cell.
    B) two egg cells by a single sperm cell.
    C) a single egg cell by two sperm cells.
    D) two egg cells by two sperm cells.

297. Twins who develop from separate fertilized eggs are called _____ twins.
A) epigenetic
B) monozygotic
C) identical
D) fraternal

298. Unlike identical twins, fraternal twins are described as
A) epigenetic.
B) dizygotic.
C) extraverted.
D) monozygotic.

299. Twin studies suggest that the risk of having autism spectrum disorder is influenced by
A) epigenetics.
B) free-floating stress hormones.
C) heredity.
D) organic methyl molecules.

300. Compared with fraternal twins, identical twins have been found to be _____ similar in neuroticism, and _____ similar in extraversion.
A) more; less
B) less; less
C) more; more
D) less; more

301. Who are likely to show the greatest similarity in personality?
A) Ruth and Ramona, identical twins
B) Philip and Paul, fraternal twins
C) Larry and Laura, brother and sister
D) Vincent Sr. and Vincent Jr., father and son

302. Juan and Alonzo are fraternal twin brothers, whereas Jake and Alex are identical twin brothers. The similarities between Jake and Alex with respect to _____ are likely to be greater than the similarities between Juan and Alonzo.
A) extraversion
B) neuroticism
C) physical appearance
D) all of these characteristics

303. Compared with fraternal twins, identical twins are _____ similar in physical appearance. Compared with unrelated look-alike pairs of individuals, identical twins report _____ similar personalities.
A) no more; more
B) more; no more
C) no more; no more
D) more; more

304. Environmental influences on personality traits are most clearly highlighted by comparing
A) identical twins raised together with fraternal twins raised apart.
B) identical twins raised together with fraternal twins raised together.
C) identical twins raised apart with fraternal twins raised together.
D) identical twins raised together with identical twins raised apart.

305. Identical twins have been shown to have some amazing psychological similarities. But we should be cautious about attributing these similarities to shared genes because
A) the twins may have been raised in completely different environments.
B) genetic factors influence physical, not psychological, characteristics.
C) any two strangers are likely to share many coincidental similarities.
D) many fraternal twins have been shown to be psychologically different from each other.

306. Differences between men and women in personality traits that are highly heritable cannot necessarily be attributed to genetic differences between the two groups because
A) physical growth proceeds at different rates for males than for females.
B) natural selection contributes to humans' common genetic endowment.
C) heritable traits can be influenced by environmental factors.
D) genes influence the production of sex hormones.

307. The personalities of adopted children
A) are very similar to the personalities of the other children in their adoptive families.
B) are very similar to the personalities of their biologically related siblings.
C) are not very similar to the personalities of their adoptive parents.
D) are more similar to the personalities of their caregiving adoptive parents than to the personalities of their biological parents.

308. Macaque monkeys have been found to have personalities that resemble their biological mother, rather than their foster mother. This demonstrates that
    A) heredity shapes personality.
    B) environment shapes personality.
    C) nurture shapes personality.
    D) temperament lays the foundation for personality.

309. Jason and Alex are biologically unrelated adolescents who were adopted as infants and raised together. For which of the following are Jason and Alex LEAST likely to resemble each other any more than they resemble a genetically unrelated adolescent from another home in their neighborhood?
    A) extraversion
    B) religious beliefs
    C) table manners
    D) political attitudes

310. The home environment most clearly has a greater influence on children's _____ than on their _____.
    A) political attitudes; economic values
    B) extraversion; table manners
    C) religious beliefs; personality traits
    D) neuroticism; religious beliefs

311. Children in adoptive homes are _____ likely than average to experience parental neglect and abuse. They have typically grown up to be _____ altruistic than average.
    A) more; less
    B) more; more
    C) less; less
    D) less; more

312. While you develop callused feet when you go barefoot for a summer, your neighbor remains a tenderfoot by protecting her feet with shoes. The differences in skin toughness between you and your neighbor are best attributed to
    A) the molecular structure of genes.
    B) person-to-person genetic variations.
    C) the impact of epigenetic marks on gene expression.
    D) the interaction of genetic and environmental influences.

313. An African butterfly that is green in the summer turns brown in the fall thanks to a temperature-controlled genetic switch. This best illustrates that genes are
    A) dizygotic.
    B) self-regulating.
    C) epigenetic marks.
    D) protein molecules.

314. When the effect of one factor depends on the presence of another factor, outcomes are said to reflect
    A) an epigenetic mark.
    B) an interaction.
    C) natural selection.
    D) adaptive flexibility.

315. The unique genetically influenced traits of children often evoke predictable responses from their caregivers. This best illustrates the _____ of nature and nurture.
    A) heritability
    B) interaction
    C) epigenetics
    D) independence

316. People have always responded so positively to Alyssa's good looks that she has developed a socially confident and outgoing personality. This best illustrates the interaction of
    A) genes and chromosomes.
    B) evolution and natural selection.
    C) nature and nurture.
    D) behavior genetics and evolutionary psychology.

317. The study of influences on gene expression that occur without a DNA change is called
    A) genomics.
    B) epigenetics.
    C) behavior genetics.
    D) evolutionary psychology.

318. An organic methyl molecule attached to part of a DNA strand has been identified as a(n)
    A) genome.
    B) double helix.
    C) epigenetic mark.
    D) self-regulating gene.

319. The molecules that can block genetic expression are called
    A) genomes.
    B) chromosomes.
    C) stress hormones.
    D) epigenetic marks.

320. Infant rats deprived of their mothers' normal licking had more _____ that block access to the “on” switch for developing the brain's stress hormone receptors.
    A) self-regulating genes
    B) neurotransmitters
    C) genomes
    D) epigenetic molecules

321. If chronic child abuse alters a victim's gene expression in such a fashion as to trigger depression, this would be said to illustrate
    A) natural selection.
    B) an epigenetic effect.
    C) high serotonin levels.
    D) a genetic mutation.

322. Evolutionary psychology studies the evolution of behavior and the mind using principles of
    A) behavior genetics.
    B) epigenetics.
    C) genomics.
    D) natural selection.

323. The principle of natural selection was first advanced by
    A) Dmitry Belyaev.
    B) Sigmund Freud.
    C) Charles Darwin.
    D) Thomas Bouchard.

324. Inherited trait variations that contribute to reproduction and survival will most likely to be passed on to succeeding generations. This best illustrates
    A) adaptive flexibility.
    B) behavior genetics.
    C) natural selection.
    D) self-regulation.

325. Several organisms from a strain of bacteria infecting hospital patients inherited a mutation that increased their resistance to the hospital's antibacterial drugs. Over time, the drug-resistant bacteria increasingly outnumbered the bacteria without the mutation. This best illustrates
A) domestication.
B) an epigenetic mark.
C) natural selection.
D) behavior genetics.

326. Evolutionary psychology is most likely to emphasize that human adaptiveness to a variety of different environments has contributed to
A) the second Darwinian revolution.
B) genetic mutations.
C) epigenetic marks.
D) reproductive success.

327. Our adaptive flexibility in responding to different environments contributes to our fitness, which refers to
A) random errors in the replication of genes.
B) epigenetic marks that regulate gene expression.
C) our ability to survive and reproduce.
D) the interaction of our genes with the environment.

328. A random error in gene replication is known as a(n)
A) epigenetic mark.
B) genome.
C) mutation.
D) selected trait.

329. A random alteration in the DNA sequence within one of his genes has caused James to suffer a rare form of nearsightedness. His difficulty best illustrates the impact of
A) an epigenetic mark.
B) a mutation.
C) free-floating stress hormones.
D) an organic methyl molecule.

330. Our shared human genome is the complete
    A) collection of epigenetic marks that regulate gene expression.
    B) range of biological and behavioral traits that contribute to reproductive success.
    C) genetic profile common to all humanity.
    D) set of interactions between our shared genes and our shared environments.

331. If a genetically based aversion to the bitter taste of rhubarb leaves contributes to survival, that trait will likely be passed on from parents to offspring. This best illustrates
    A) behavior genetics.
    B) domestication.
    C) natural selection.
    D) an epigenetic mark.

332. According to evolutionary psychologists, behaviors that promote reproductive success are likely to be
    A) socially prohibited.
    B) genetically predisposed.
    C) ecologically disruptive.
    D) disease-producing.

333. According to evolutionary psychologists, our predisposition to overconsume fatty junk foods most clearly illustrates that we are biologically prepared to behave in ways that promoted the _____ of our ancestors.
    A) hunting skills
    B) epigenetic marks
    C) reproductive success
    D) neuroticism

334. Evolutionary psychologists would be most likely to predict that
    A) more people are biologically predisposed to fear guns than to fear snakes.
    B) children are more likely to be valued by their biological fathers than by their stepfathers.
    C) people are the most romantically attracted to those who are the most genetically dissimilar to themselves.
    D) genetic predispositions have little effect on our social relationships.

335. Professor Vaughn is interested in why people are more likely to have phobias about things that occur in nature, such as snakes, than about things that are increasingly dangerous, such as weapons. She is likely interested in
    A) epigenetics.
    B) gene-environment interactions.
    C) behavior genetics.
    D) evolutionary psychology.

336. Brain localization of function was first suggested by the study of
    A) philosophy.
    B) phrenology.
    C) biology.
    D) behavior genetics.

337. When is brain plasticity the strongest?
    A) infancy
    B) childhood
    C) adolescence
    D) adulthood

338. Which of the following statements is TRUE regarding the human brain?
    A) The human brain is designed to change and adapt to the environment.
    B) The human brain is fully developed at birth.
    C) The human brain cannot change with experience.
    D) The human brain can be divided into six lobes.

339. Which of the following is NOT a function of dendrites?
    A) insulate and speed the impulse of neurons
    B) receive information from neighboring neurons
    C) integrate information from neighboring neurons
    D) conduct received information toward the cell body

340. Which of the following is NOT a function of glial cells?
    A) They provide nutrients and insulating myelin.
    B) They guide neural connections.
    C) They clean up after neurons communicate with one another.
    D) They insulate axons and speed their impulses.

341. A brief electrical charge that travels down the axon of a neuron is called the
    A) action potential.
    B) threshold.
    C) refractory period.
    D) communication response.

342. Depolarization refers to
    A) the loss of a neuron's inside/outside electrical charge difference.
    B) neural networking.
    C) the release of neurotransmitters at the axon's knob-like terminals.
    D) a neuron's resting between action potentials.

343. Most neural signals are
    A) excitatory.
    B) inhibitory.
    C) either excitatory or inhibitory.
    D) neither excitatory nor inhibitory.

344. A(n) _____ is a molecule that inhibits a neurotransmitter's action.
    A) agonist
    B) antagonist
    C) endorphin
    D) motor neuron

345. Which of the following is NOT a type of neuron through which information travels in the nervous system?
    A) sensory neuron
    B) motor neuron
    C) interneuron
    D) autonomic neuron

346. The central nervous system is composed of
    A) the brain and the spinal cord.
    B) all of the neurons in the body.
    C) the spinal cord and neurons.
    D) the brain and neurons.

347. The peripheral nervous system is subdivided into the
    A) central and somatic nervous systems.
    B) sympathetic and parasympathetic nervous systems.
    C) somatic and autonomic nervous systems.
    D) autonomic and sympathetic nervous systems.

348. Tabatha is much taller than her classmate Elena. The height of each girl is controlled by the release of hormones by the
    A) pituitary gland.
    B) adrenal glands.
    C) glial cells.
    D) somatic nervous system.

349. Magnetic resonance imaging uses _____ and radio waves to produce computer-generated images of soft tissue.
    A) magnetic fields
    B) brain lesions
    C) a radioactive form of glucose
    D) electrodes placed on the scalp

350. The brain's oldest region is the
    A) hippocampus.
    B) amygdala.
    C) brainstem.
    D) hypothalamus.

351. Which of the following is located inside the brainstem in between your ears?
    A) hippocampus
    B) hypothalamus
    C) thalamus
    D) reticular formation

352. Which brain structure relays information from the eyes to the visual cortex?
    A) thalamus
    B) amygdala
    C) medulla
    D) cerebellum

353. After suffering an accidental brain injury, Kira has difficulty walking in a smooth and coordinated manner. She has probably suffered damage to her
    A) amygdala
    B) hypothalamus.
    C) cerebellum.
    D) corpus callosum.

354. The limbic system structure that regulates hunger is called the
    A) thalamus.
    B) amygdala.
    C) hippocampus.
    D) hypothalamus.

355. The limbic system's hippocampus
    A) coordinates body movement and balance.
    B) regulates hunger and thirst.
    C) plays a central role in fear and rage.
    D) helps process explicit memories for storage.

356. Which of the following is the newest brain structure?
    A) brainstem
    B) parietal lobe
    C) limbic system
    D) cerebral cortex

357. Which portion of the cerebral cortex is most directly involved in making plans and formulating moral judgments?
    A) occipital lobes
    B) frontal lobes
    C) temporal lobes
    D) parietal lobes

358. Where is the temporal lobe located?
    A) behind the forehead
    B) at the back of the head
    C) on the top of the head
    D) just above the ears

359. The brain devotes more tissue within the _____ for body areas requiring the most precise movement control such as the fingers.
A) hippocampus
B) corpus callosum
C) occipital lobes
D) motor cortex

360. The regions of the parietal lobes that are involved in mathematical and spatial reasoning are known as
A) the hippocampus.
B) the corpus callosum.
C) the somatosensory cortex.
D) association areas.

361. If you lose a foot, the somatosensory cortex that received its input will begin to pick up signals from the formerly adjoined leg. This best illustrates the value of
A) neurogenesis.
B) lateralization.
C) plasticity.
D) hemispherectomy.

362. The right hemisphere of Julie's brain is better than her left hemisphere at recognizing facial expressions of emotion. This best illustrates
A) neurogenesis.
B) plasticity.
C) lateralization.
D) brain fissures.

363. Speech is processed primarily in the right hemisphere by the _____ of those who are left-handed and by the _____ of those who are right-handed.
A) minority; minority
B) majority; majority
C) minority; majority
D) majority; minority

364. Whether or not _____ is/are expressed depends on environmental influences.
A) genes
B) DNA
C) chromosomes
D) genomes

365. The genome is the complete
    A) collection of sexual characteristics regulated by sex hormones.
    B) range of traits that makes up our temperament.
    C) set of genetic materials in an organism's chromosomes.
    D) set of interactions between genes and environments.

366. Compared with fraternal twins, identical twins are
    A) less similar in their risk of developing autism spectrum disorder and less similar in risk of being emotionally unstable.
    B) more similar in their risk of developing autism spectrum disorder and more similar in risk of being emotionally unstable.
    C) equally similar in their risk of developing autism spectrum disorder and more similar in risk of being emotionally unstable.
    D) more similar in their risk of developing autism spectrum disorder and equally similar in risk of being emotionally unstable.

367. Compared with fraternal twins, identical twins are likely to be _____ similar in intelligence and _____ similar in personality.
    A) no more; no more
    B) no more; more
    C) more; no more
    D) more; more

368. Adoptive parents are LEAST likely to influence the _____ of their adopted children.
    A) personality traits
    B) religious beliefs
    C) political attitudes
    D) moral values

369. The study of molecular mechanisms by which environments can trigger or block genetic expression is called
    A) behavior genetics.
    B) molecular genetics.
    C) epigenetics.
    D) genomics.

370. Researchers studying mice have found that in utero exposure to certain chemicals can cause genetically identical twins to have different-colored fur. This is best explained by the fact that genetically linked traits can be modified by
    A) serotonin molecules.
    B) epigenetic marks.
    C) a reactive temperament.
    D) chromosomes.

371. The prevalence of genetically predisposed traits that have a reproductive advantage is best explained in terms of
    A) mutations.
    B) natural selection.
    C) the human genome.
    D) heredity.

372. Dmitry Belyaev and Lyudmila Trut successfully domesticated wild foxes by means of
    A) gene splicing.
    B) selective mating.
    C) food deprivation.
    D) hormone injections.

373. Which of the following is a major source of genetic diversity?
    A) mutations
    B) epigenetic marks
    C) adaptive flexibility
    D) free-floating stress hormones

374. An evolutionary psychologist would suggest that people are genetically predisposed to
    A) fear dangerous animals.
    B) love their own children.
    C) seek healthy-looking mates.
    D) do all of these things.

375. In emphasizing that heredity's effects on behavior depend on a person's home environment, psychologists are highlighting the importance of
    A) individualism.
    B) a pruning process.
    C) androgyny.
    D) nature–nurture interactions.

376. Which psychologists study the links between biological and psychological processes?
    A) biological
    B) developmental
    C) cognitive
    D) evolutionary

377. Which brain area processes spatial memories?
    A) hypothalamus
    B) hippocampus
    C) medulla
    D) pons

378. What is another name for a nerve cell?
    A) cell body
    B) neuron
    C) axon
    D) dendrite

379. Although all neurons are different, they do have some characteristics in common. What are these characteristics?
    A) They all have a cell body, dendrites, and an axon.
    B) They are all covered with a myelin sheath and are selectively permeable.
    C) None of them experience a resting potential.
    D) None of them experience depolarization.

380. Which of the following provide nutrients and insulating myelin, guide neural connections, and clean up after neurons communicate with one another?
    A) glial cells
    B) neural impulses
    C) motor neurons
    D) myelin sheath

381. The resting pause of a neuron is called the
    A) communication response.
    B) refractory period.
    C) threshold.
    D) ion.

382. The meeting point between neurons is called the
    A) nerve cell.
    B) synapse.
    C) axon.
    D) cell body.

383. The chemical messengers that enable neurons to communicate with one another are called
    A) neurotransmitters.
    B) hormones.
    C) endorphins.
    D) molecules.

384. A(n) _____ is a molecule that increases a neurotransmitter's action.
    A) agonist
    B) antagonist
    C) endorphin
    D) motor neuron

385. The autonomic nervous system can be subdivided into the
    A) central and somatic nervous systems.
    B) sympathetic and parasympathetic nervous systems.
    C) somatic and parasympathetic nervous systems.
    D) peripheral and sympathetic nervous systems.

386. The endocrine system's hormones are _____ messengers that travel through the _____.
    A) electrical; bloodstream
    B) chemical; bloodstream
    C) electrical; neural networks
    D) chemical; body's organs

387. To monitor the electrical activity in the brain that is triggered by hearing one's own name, researchers would make use of a(n)
    A) MRI.
    B) PET scan.
    C) EEG.
    D) brain lesion.

388. What is the oldest and most innermost section of the brain?
    A) brainstem
    B) medulla
    C) thalamus
    D) reticular formation

389. Your life would be most immediately threatened if you suffered destruction of the
    A) amygdala.
    B) hippocampus.
    C) cerebellum.
    D) medulla.

390. 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.

391. Which neural center in the limbic system plays an important role in emotions such as fear and rage?
    A) amygdala
    B) thalamus
    C) nucleus accumbens
    D) hypothalamus

392. If people are shown happy and angry faces, their _____ is most likely to activate in response to the angry faces.
    A) thalamus
    B) hypothalamus
    C) basal ganglia
    D) amygdala

393. Research has suggested that a reward deficiency syndrome may contribute to
    A) insomnia.
    B) substance use disorders.
    C) schizophrenia.
    D) Parkinson's disease.

394. Which lobe is located behind your forehead?
    A) frontal
    B) parietal
    C) occipital
    D) temporal

395. Which lobe is located at the back of your head?
    A) frontal
    B) parietal
    C) occipital
    D) temporal

396. Which lobe of the cerebral cortex is most directly involved in controlling the facial muscle movements necessary for speaking?
    A) occipital
    B) frontal
    C) temporal
    D) parietal

397. The visual cortex is located in the
    A) occipital lobes.
    B) parietal lobes.
    C) temporal lobes.
    D) association areas.

398. Association areas are found in
    A) the frontal lobes.
    B) the occipital lobes.
    C) the temporal lobes.
    D) all four lobes.

399. New information and memories are processed in the
    A) frontal lobes.
    B) occipital lobes.
    C) parietal lobes.
    D) temporal lobes.

400. Following massive damage to his frontal lobes, Phineas Gage was most strikingly debilitated by
    A) muscle spasms.
    B) memory loss.
    C) auditory hallucinations.
    D) irritability.

401. Brain scans indicate that well-practiced pianists have a larger-than-usual auditory cortex area that encodes piano sounds. This best illustrates the impact of
    A) neurogenesis.
    B) lateralization.
    C) brain fissures.
    D) plasticity.

402. The brain's ability to produce new neurons is referred to as
    A) plasticity.
    B) neurogenesis.
    C) functional connectivity.
    D) split brain.

403. Research with split-brain patients suggests that the _____ typically constructs the theories people offer to explain their own behaviors.
    A) corpus callosum
    B) left cerebral hemisphere
    C) somatosensory cortex
    D) right cerebral hemisphere

404. The genetic transfer of characteristics from parents to their children is known as
    A) environmental influences.
    B) biological influences.
    C) heredity.
    D) behavior genetics.

405. Chromosomes are composed of
    A) epigenetic molecules.
    B) genomes.
    C) protein molecules.
    D) deoxyribonucleic acid.

406. Identical twins who have separate placentas are somewhat less similar than identical twins who share a placenta. This best illustrates the influence of _____ on development.
    A) prenatal environments
    B) genetic predispositions
    C) temperament
    D) serotonin

407. The personalities of biologically unrelated children who grow up in the same home environment show _____ resemblance, and the personalities of biologically related nontwin siblings who grow up in the same home environment show _____resemblance.
    A) a lot of; a lot of
    B) little; little
    C) a lot of; little
    D) little; a lot of

408. Two individuals are most likely to differ in personality if they are
    A) fraternal twins who were raised together.
    B) identical twins who were raised apart.
    C) fraternal twins who were raised apart.
    D) identical twins who were raised together.

409. Adopted children are especially likely to have similar _____ if raised in the same home.
    A) temperaments
    B) genomes
    C) personality traits
    D) attitudes

410. The fact that genes react to the environment indicates that genes are
    A) self-regulating.
    B) interacting.
    C) expressed.
    D) inactive.

411. Evolutionary psychology most clearly suggests that human behavioral and biological similarities arise from our shared
    A) protein molecules.
    B) genome.
    C) interaction.
    D) mutations.

412. Evolutionary psychologists would be most likely to attribute the human tendency to fear spiders and snakes to
    A) a universal morality.
    B) domestication.
    C) epigenetics.
    D) genetic predispositions.

413. Biological psychology is best described as the scientific study of the links between
    A) physiological activity and psychological events.
    B) genes and neurotransmitters.
    C) sensory and motor neurons.
    D) the CNS and the PNS.

414. Professor Seif conducts research on the relationship between autonomic nervous system functioning and sexual motivation. Her research focus best represents the specialty area known as
    A) biological psychology.
    B) psychoanalysis.
    C) cognitive psychology.
    D) endocrinology.

415. Within little more than the past century, biological psychologists have learned all of the following EXCEPT that
    A) our brain is adaptive and wired by our experiences.
    B) brain systems can be divided into smaller subsystems.
    C) nerve cells can communicate with each other by sending chemical messages.
    D) specific brain systems do not serve specific functions.

416. Which of the following are components of a biopsychosocial system?
    A) the cell body, dendrite, and axon
    B) neurotransmitters and the synaptic gaps
    C) biological, psychological, and social-cultural systems
    D) agonist and antagonist molecules

417. Plasticity refers to the brain's capacity to
    A) automatically regulate heartbeat and breathing.
    B) generate a sense of conscious awareness.
    C) build new neural pathways.
    D) increase a neurotransmitter's action.

418. The neural change that is strongest in childhood but also continues throughout life is called
    A) plasticity.
    B) phrenology.
    C) localization of function.
    D) hippocampal repair.

419. Mark has learned all of the different main roads and side roads in his town from his driving experience. What brain change is likely to be evident?
    A) His hippocampus has increased in size.
    B) His auditory cortex has increased.
    C) His adrenal glands are smaller than they were earlier.
    D) His pituitary gland has doubled in size.

420. Briana has been playing the piano since she was 4 years old. Now that she is 50,
    A) her hippocampus has enlarged.
    B) her auditory cortex has gotten larger.
    C) her adrenal glands are smaller than they were earlier.
    D) her pons has doubled in size.

421. The cells that serve as the basic building blocks of the body's information system are called
    A) neurons.
    B) neurotransmitters.
    C) agonists.
    D) genes.

422. The cell body is
    A) a brief electrical charge that travels down an axon.
    B) the cell's life-support center.
    C) a molecule that increases a neurotransmitter's action.
    D) the neuron extension that passes messages through its branches to other neurons.

423. 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.

424. 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.

425. 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

426. Which part of a neuron is often encased by a fatty myelin sheath?
A) axon
B) synaptic gap
C) cell body
D) dendrite

427. The myelin sheath helps to increase the _____ of neural impulses.
A) frequency
B) intensity
C) threshold
D) speed

428. The slowdown of neural communication in multiple sclerosis results from the degeneration of the
A) amygdala.
B) endorphins.
C) myelin sheath.
D) pituitary gland.

429. Ruth has experienced progressively increasing difficulty moving, speaking, and swallowing due to the deterioration of the myelin sheaths within her nervous system. Ruth most clearly suffers from
A) epileptic seizures.
B) Alzheimer's disease.
C) multiple sclerosis.
D) depression.

430. Nerve cells receive life-supporting nutrients and insulating myelin from
A) glial cells.
B) neurotransmitters.
C) endorphins.
D) hormones.

431. A postmortem analysis of Einstein's brain revealed a much greater concentration of _____ than found in the average adult brain.
A) glutamate
B) opiate receptors
C) glial cells
D) ACh-producing neurons

432. An action potential refers to a
A) neural impulse.
B) synaptic gap.
C) neurotransmitter.
D) reflex.

433. An electrically charged atom is called a(n)
A) antagonist.
B) ion.
C) action potential.
D) radioactive tracer.

434. A car controlled by a computerized navigational guidance system is likely to respond more rapidly to sudden obstructions in its path than a car controlled by a human driver. This is primarily due to the fact that
A) a neuron's reaction is an all-or-none response.
B) an axon branches into junctions with many other neurons.
C) the fatty tissue layer that insulates axons slows the transmission of neural impulses.
D) the speed of neural impulses is much slower than the speed of electricity through a wire.

435. The fluid outside a resting axon's membrane has mostly positively charged _____ ions.
A) serotonin
B) sodium
C) dopamine
D) protein

436. A resting axon's fluid interior contains both large, _____ charged protein ions and smaller, _____ charged potassium ions.
A) positively; positively
B) negatively; negatively
C) positively; negatively
D) negatively; positively

437. 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.

438. Negatively charged ions are not permitted to enter the neuron when it fires because the
A) myelin sheath is not insulating the neuron.
B) neuron is selectively permeable.
C) neural signal is inhibitory.
D) glial cells are not guiding the neural connection.

439. The selective permeability of a neural membrane enables the development of a
A) myelin sheath.
B) resting potential.
C) neural network.
D) synaptic gap.

440. The depolarization of an axon is most likely to occur when
A) positively charged sodium ions rush into the axon.
B) negatively charged potassium ions rush into the axon.
C) positively charged sodium ions rush out of the axon.
D) negatively charged potassium ions rush out of the axon.

441. The temporary inflow of positive ions through an axon membrane is the
A) resting potential.
B) refractory period.
C) action potential.
D) threshold.

442. A neural impulse is generated only when excitatory minus inhibitory signals exceed a certain
A) action potential.
B) synaptic gap.
C) level of reuptake.
D) threshold.

443. In the process of beginning an action potential, the threshold refers to
A) neuron extensions that conduct messages toward the cell body.
B) a minimum intensity of excitatory minus inhibitory stimulation.
C) neuron extensions that send messages to other neurons.
D) the junction between a sending and receiving neuron.

444. As the action potential moves speedily down the axon, _____ in the cell membrane finish restoring the first section of the axon to its resting potential.
A) positively charged ions
B) sodium/potassium pumps
C) negatively charged ions
D) protein ions

445. An action potential registers a minimal electrical charge of
A) –70 millivolts.
B) –55 millivolts.
C) +40 millivolts.
D) +70 millivolts.

446. A brief resting pause that occurs after a neuron has fired is called
    A) a synaptic gap.
    B) an action potential.
    C) a refractory period.
    D) reuptake.

447. Nancy the neuron is taking a short break. This called the
    A) communication response.
    B) refractory period.
    C) threshold.
    D) ion.

448. 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.

449. The neural impulses sent from your eyes to the visual processing centers of your brain will be no stronger or faster if you glance at a large campfire than if you glance at a burning candle. This best illustrates a characteristic of neural functioning known as
    A) reuptake.
    B) depolarization.
    C) selective permeability.
    D) an all-or-none response.

450. A strong stimulus is experienced as more intense than a weak stimulus because a strong stimulus triggers
    A) a speedier action potential.
    B) a higher-voltage action potential.
    C) more neurons to fire, and to fire more often.
    D) the release of epinephrine.

451. The junctions between the axon tips of sending neurons and the dendrites or cell bodies of receiving neurons are called
    A) interneurons.
    B) synapses.
    C) neural networks.
    D) thresholds.

452. Synaptic gaps separate neurotransmitter receptor sites from
    A) glial cells.
    B) axon terminals.
    C) a myelin sheath.
    D) dendrite fibers.

453. Neurons with the greatest number of dendrites and axon terminals would also be most likely to share the greatest number of _____ with other neurons.
    A) glial cells
    B) endorphins
    C) refractory periods
    D) synapses

454. Neurotransmitters are molecules that travel across the
    A) cell body.
    B) synaptic gap.
    C) myelin sheath.
    D) threshold.

455. Neurotransmitters are best described as
    A) electrically charged atoms.
    B) sodium/potassium pumps.
    C) chemical messengers.
    D) action potentials.

456. Neurotransmitters bind to receptor sites and influence the flow of _____ into receiving neurons.
    A) ions
    B) glial cells
    C) myelin
    D) hormones

457. Neurotransmitter receptor sites are primarily located on the
    A) dendrites.
    B) myelin sheath.
    C) glial cells.
    D) axon terminals.

458. The reuptake of a neurotransmitter such as serotonin would involve the reabsorption of serotonin into a(n)
A) axon terminal.
B) dendrite.
C) myelin sheath.
D) glial cell.

459. The reabsorption of excess neurotransmitter molecules by a sending neuron is called
A) an action potential.
B) the all-or-none response.
C) a refractory period.
D) reuptake.

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

461. When the transmission of ACh is blocked, the result is
A) depression.
B) aggression.
C) muscular paralysis.
D) schizophrenia.

462. After ingesting a poisonous substance, Alex experienced a temporary muscular paralysis. The poison most likely interfered with the normal functioning of the neurotransmitter
A) serotonin.
B) dopamine.
C) acetylcholine.
D) norepinephrine.

463. Endorphins are neurotransmitter molecules similar to
A) dopamine.
B) serotonin.
C) morphine.
D) acetylcholine.

464. Endorphins are most directly involved in the control of
    A) body temperature.
    B) physical pain.
    C) muscle contraction.
    D) attention.

465. The pain of childbirth is most likely to be reduced by the release of
    A) acetylcholine.
    B) endorphins.
    C) dopamine.
    D) glutamate.

466. 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.

467. Steven jogs more than two miles every day. When asked why, he states that it makes him feel good. This feeling can be explained by the release of
    A) agonists.
    B) neurons.
    C) endorphins.
    D) antagonists.

468. Acupuncture may be effective due to the release of
    A) agonists.
    B) neurons.
    C) endorphins.
    D) antagonists.

469. Morphine and heroin are
    A) ACh agonists.
    B) hormones.
    C) dendrites.
    D) opiates.

470. The brain's own natural production of endorphins is likely to be suppressed by
    A) physical pain.
    B) physical exercise.
    C) heroin use.
    D) antidepressant drugs.

471. Agonists are chemical molecules that increase the activity of
    A) motor neurons.
    B) genes.
    C) synapses.
    D) neurotransmitters.

472. Any drug molecule that binds to a neurotransmitter receptor site and mimics the neurotransmitter's excitatory or inhibitory effects is a(n)
    A) glutamate.
    B) steroid.
    C) agonist.
    D) action potential.

473. James is being treated for depression with a drug that blocks the reuptake of serotonin. This antidepressant drug functions as a(n)
    A) steroid.
    B) agonist.
    C) opiate.
    D) antagonist.

474. A drug molecule that inhibits or blocks a neurotransmitter's action is called a(n)
    A) opiate.
    B) agonist.
    C) antagonist.
    D) glutamate.

475. Botulin blocks the release of ACh. Botulin is best described as a(n)
    A) opiate.
    B) glutamate.
    C) antagonist.
    D) neurotransmitter.

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

477. Mr. Averro's symptoms of confusion and memory loss have led his physicians to conclude that he suffers from Alzheimer's disease. His symptoms are most likely to be linked with a deterioration of brain cells that produce the neurotransmitter
    A) dopamine.
    B) acetylcholine.
    C) epinephrine.
    D) endorphins.

478. 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.

479. Timothy has recently been diagnosed with schizophrenia. Doctors have found an oversupply of the neurotransmitter _____ in his brain.
    A) ACh
    B) dopamine
    C) serotonin
    D) GABA

480. Janelle experiences difficulty sleeping and is seeking medical help for her lengthy episodes of depression and loss of energy. Effective prescription drugs for treating these symptoms would most likely be designed to increase the availability of the neurotransmitter
    A) GABA.
    B) ACh.
    C) serotonin.
    D) dopamine.

481. An undersupply of GABA is most closely linked to
    A) schizophrenia.
    B) paralysis.
    C) insomnia.
    D) Alzheimer's disease.

482. 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.

483. The body's speedy electrochemical information network is called the
    A) circulatory system.
    B) cognitive system.
    C) nervous system.
    D) endocrine system.

484. The brain and spinal cord form the
    A) autonomic nervous system.
    B) somatic nervous system.
    C) central nervous system.
    D) endocrine system.

485. Which of the following is known as the body's decision maker?
    A) central nervous system
    B) peripheral nervous system
    C) somatic nervous system
    D) autonomic nervous system

486. Which of the following is a communication network that takes in information from the environment and the body's tissues, makes decisions, and then sends back information and orders to the body's tissues?
    A) autonomic nervous system
    B) somatic nervous system
    C) nervous system
    D) parasympathetic nervous system

487. 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

488. Nerves are neural cables formed from bundles of
A) endorphins.
B) interneurons.
C) axons.
D) lesions.

489. Information is carried from the body's tissues and sensory receptors to the central nervous system by
A) interneurons.
B) sensory neurons.
C) motor neurons.
D) endocrine glands.

490. Sensory neurons carry information inward to the brain and spinal cord. This means that sensory neurons are
A) efferent.
B) afferent.
C) different.
D) indifferent.

491. Efferent is to afferent as _____ is to _____.
A) sympathetic nervous system; parasympathetic nervous system
B) sensory neuron; motor neuron
C) parasympathetic nervous system; sympathetic nervous system
D) motor neuron; sensory neuron

492. Sensory neurons transmit signals to
A) glands.
B) glial cells.
C) motor neurons.
D) interneurons.

493. 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) afferent neurons
D) the autonomic nervous system

494. Motor neurons are an important part of the
A) central nervous system.
B) circulatory system.
C) peripheral nervous system.
D) endocrine system.

495. Motor neurons carry instructions outward, making them
A) efferent.
B) afferent.
C) different.
D) indifferent.

496. Information travels from the spinal cord to the brain through
A) interneurons.
B) somatic nervous system.
C) adrenal glands.
D) the sympathetic nervous system.

497. The peripheral nervous system transfers information from the _____ to the rest of the body.
A) brain
B) sensory neurons
C) interneurons
D) glands

498. The division of the peripheral nervous system controlling the body's skeletal muscles is the
A) motor nervous system.
B) sympathetic nervous system.
C) somatic nervous system.
D) parasympathetic nervous system.

499. The part of the peripheral nervous system that controls the movement of your arms when you write is the
A) autonomic nervous system.
B) sympathetic nervous system.
C) somatic nervous system.
D) parasympathetic nervous system.

500. Neural signals from the spinal cord are transmitted to your stomach muscles by the
A) skeletal nervous system.
B) central nervous system.
C) autonomic nervous system.
D) somatic nervous system.

501. 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.

502. 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

503. The parasympathetic nervous system is a division of the _____ nervous system.
A) autonomic
B) somatic
C) central
D) sympathetic

504. When Jenny saw that a large barking dog was enclosed by a very high fence, her racing heartbeat began to slow. The slowing of her heartbeat was most directly regulated by her
A) hypothalamus.
B) parasympathetic nervous system.
C) somatic nervous system.
D) sympathetic nervous system.

505. 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

506. The autonomic nervous system helps to maintain a relatively consistent body temperature despite environmental temperature changes. This best illustrates
    A) reuptake.
    B) a refractory period.
    C) depolarization.
    D) homeostasis.

507. The neurons of the central nervous system cluster into work groups known as
    A) terminal branches.
    B) dendrites.
    C) motor neurons.
    D) neural networks.

508. The brain's information-processing capacities are most clearly enhanced by
    A) neural networks.
    B) ACh agonists.
    C) endorphins.
    D) reflexes.

509. 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) resting potentials.
    C) neural networks.
    D) serotonin antagonists.

510. The spinal cord is part of the _____ nervous system.
    A) central
    B) peripheral
    C) autonomic
    D) somatic

511. The part of the central nervous system that carries _____ information to your brain and _____ information to your body parts is the spinal cord.
    A) sensory; motor-control
    B) reflex; peripheral
    C) parasympathetic; sympathetic
    D) somatic; autonomic

512. As Lee plays soccer, information from his senses _____ to his brain for processing.
    A) passes through his nervous system
    B) travels up his spinal cord
    C) navigates via the sympathetic nervous system
    D) jumps to the parasympathetic nervous system

513. A simple _____ is composed of a single sensory neuron and a single motor neuron.
    A) agonist molecule
    B) spinal reflex
    C) endocrine pathway
    D) homeostatic response

514. The simplest neural pathways are those that govern our
    A) thoughts.
    B) emotions.
    C) reflexes.
    D) sexual drives.

515. The knee-jerk reflex requires the activity of the
    A) central nervous system.
    B) autonomic nervous system.
    C) sympathetic nervous system.
    D) parasympathetic nervous system.

516. Celeste 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 endorphins.
    D) was activated by her self-regulating autonomic nervous system.

517. The body's chemical communication system that is much slower than the nervous system is called the
    A) somatic system.
    B) parasympathetic system.
    C) autonomic system.
    D) endocrine system.

518. The chemical messengers of the endocrine system are called
    A) neurotransmitters.
    B) hormones.
    C) agonists.
    D) genes.

519. Which of the following is true regarding hormones and neurotransmitters?
    A) They are the same thing.
    B) Some hormones are chemically identical to neurotransmitters.
    C) Only hormones produce molecules that act on receptors elsewhere.
    D) The effect of neurotransmitters lasts longer than that of hormones.

520. In a moment of danger, an individual's adrenal glands release
    A) ACh.
    B) GABA.
    C) epinephrine.
    D) dopamine.

521. When confronted by a large and potentially dangerous snake, Alissa experienced a surge of energy triggered by the release of _____ into her bloodstream.
    A) epinephrine
    B) oxytocin
    C) endorphins
    D) serotonin

522. Epinephrine and norepinephrine are released by the
    A) thyroid gland.
    B) pituitary gland.
    C) adrenal glands.
    D) pancreas.

523. 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.

524. The fight-or-flight response is most clearly associated with the release of _____ into the bloodstream.
    A) endorphins
    B) serotonin
    C) epinephrine
    D) dopamine

525. When insulted by a classmate, Jeremy experienced a sudden surge of autonomic nervous system arousal. Jeremy's reaction best illustrates the nature of
    A) the pain reflex.
    B) an all-or-none response.
    C) a refractory period.
    D) the fight-or-flight response.

526. Which endocrine gland regulates body growth?
    A) adrenal
    B) thyroid
    C) pituitary
    D) pancreas

527. The pituitary has been identified as a(n)
    A) antagonist.
    B) myelin sheath.
    C) master gland.
    D) agonist.

528. Social bonding is promoted by pituitary gland secretions of
    A) cortisol.
    B) epinephrine.
    C) oxytocin.
    D) dopamine.

529. The pituitary does not send messages to the sex glands until it receives a signal from the
A) thyroid gland.
B) parasympathetic nervous system.
C) somatic nervous system.
D) hypothalamus.

530. Under the influence of the _____, the _____ triggers other glands to release sex hormones, which in turn influence the brain.
A) pancreas; thyroid
B) thyroid; pancreas
C) pituitary; hypothalamus
D) hypothalamus; pituitary

531. A brain lesion refers to _____ of brain tissue.
A) electrical stimulation
B) X-ray photography
C) radioactive bombardment
D) destruction

532. Recording electrodes are placed directly on the scalp during a(n)
A) EEG.
B) PET scan.
C) MRI.
D) fMRI.

533. After suffering a head injury, Amanda was taken to a medical clinic where recording electrodes were placed directly on Amanda's scalp to monitor her brain waves. The clinic was making use of a(n)
A) EEG.
B) PET scan.
C) MRI.
D) fMRI.

534. An MEG is a(n)
    A) amplified recording of the waves of electrical activity sweeping across the brain's surface.
    B) technique that uses magnetic fields and radio waves to produce computer-generated images of soft tissue.
    C) brain-imaging technique that measures magnetic fields from the brain's natural electrical activity.
    D) visual display of brain activity that detects where a radioactive form of glucose goes while the brain performs a given task.

535. The _____ measures magnetic fields from the brain's natural electrical activity.
    A) EEG
    B) MEG
    C) PET
    D) MRI

536. Zach is participating in a study in which he sits underneath a head coil, similar to a hair salon hairdryer. What technique are the researchers using?
    A) EEG
    B) MEG
    C) PET
    D) MRI

537. 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.

538. Using magnetic fields and radio waves to produce computer-generated images of the brain's soft tissues is called a(n)
    A) MRI.
    B) EEG.
    C) brain lesion.
    D) PET scan.

539. MRI scans have revealed that some patients with schizophrenia have unusually enlarged
    A) brainstems.
    B) ventricles.
    C) limbic systems.
    D) cerebellums.

540. To monitor the sequence in which blood flows to different regions of the brain, researchers are most likely to make use of a(n)
    A) brain lesion.
    B) fMRI.
    C) electroencephalogram.
    D) MRI.

541. The oldest regions of the brain are those that regulate
    A) memory.
    B) emotion.
    C) breathing.
    D) foresight.

542. The medulla is the part of the brain that most directly regulates
    A) language comprehension.
    B) face recognition.
    C) sexual motivation.
    D) heartbeat and breathing.

543. Because a growing tumor caused damage to his brain, Joseph had to be placed on a ventilator in order to maintain his breathing. The tumor most likely damaged Joseph's
    A) hippocampus.
    B) amygdala.
    C) brainstem.
    D) hypothalamus.

544. The brainstem structure located above the medulla that helps to control sleep is called the
    A) nucleus accumbens.
    B) hippocampus.
    C) amygdala.
    D) pons.

545. 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

546. The thalamus serves as a
    A) memory bank.
    B) reward center.
    C) sensory control center.
    D) master gland.

547. Your ability to experience the physical pleasure of a hot shower is most likely to be disrupted by damage to your
    A) cerebellum.
    B) hippocampus.
    C) amygdala.
    D) thalamus.

548. The reticular formation extends from the spinal cord up through the
    A) thalamus.
    B) hypothalamus.
    C) amygdala.
    D) hippocampus.

549. Which nerve network traveling through the brainstem plays an important role in controlling arousal?
    A) reticular formation
    B) hypothalamus
    C) cerebellum
    D) medulla

550. Andrea became highly aroused and alert when stung by a bee thanks to the activation of her
    A) cerebellum.
    B) hypothalamus.
    C) reticular formation.
    D) nucleus accumbens.

551. The “little brain” attached to the rear of the brainstem is called the
    A) amygdala.
    B) thalamus.
    C) cerebellum.
    D) hippocampus.

552. A loss of physical coordination and balance is most likely to result from damage to the
    A) hypothalamus.
    B) cerebellum.
    C) hippocampus.
    D) amygdala.

553. Lee is an excellent soccer player. He is known to be able to control the ball so well that he gets it in the net every time he gets the ball. This skill is related to the functioning of his
    A) cerebellum.
    B) medulla.
    C) thalamus.
    D) reticular formation.

554. 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

555. The amygdala, hypothalamus, and hippocampus are part of the
    A) brainstem.
    B) limbic system.
    C) reticular formation.
    D) cerebral hemispheres.

556. Which limbic system structure is associated with aggression and fear?
    A) the amygdala
    B) the hypothalamus
    C) the hippocampus
    D) the medulla

557. James tends to be pretty aggressive. Which limbic structure is associated with this emotion?
    A) amygdala
    B) hypothalamus
    C) hippocampus
    D) medulla

558. If Professor Kosiba surgically removed the amygdala of a laboratory rat, the rat would most likely become
    A) hungry.
    B) sexually aroused.
    C) physically uncoordinated.
    D) less aggressive.

559. Fear of public speaking may be associated with hyperactivity in the
    A) hippocampus.
    B) hypothalamus.
    C) amygdala.
    D) cerebellum.

560. Which of the following best describes how the brain operates?
    A) It is nicely organized into structures that correspond to specific behavior categories.
    B) Researchers are not able to determine exactly how the brain operates.
    C) It is not an integrated system.
    D) While some brain structures are involved in specific behaviors, they are also involved in other mental phenomena as well.

561. The activity of the hypothalamus most directly influences
    A) thirst.
    B) muscular coordination.
    C) memory.
    D) vision.

562. The secretions of the pituitary gland are most directly regulated by the
    A) reticular formation.
    B) hypothalamus.
    C) amygdala.
    D) cerebellum.

563. Which limbic system structure regulates sexual behavior?
    A) amygdala
    B) hypothalamus
    C) hippocampus
    D) medulla

564. Olds and Milner found that a rat kept returning to a location where it had been stimulated by an electrode placed within its
    A) reticular formation.
    B) cerebellum.
    C) hypothalamus.
    D) pons.

565. The nucleus accumbens has been identified as a
    A) sensory control center.
    B) memory bank.
    C) reward center.
    D) source of aggression.

566. Animal research has revealed a general reward system related to the release of the neurotransmitter
    A) ACh.
    B) GABA.
    C) dopamine.
    D) epinephrine.

567. Newer research reveals that stimulating the brain's reward circuits in humans produces more _____than pure enjoyment.
    A) desire
    B) fatigue
    C) agitation
    D) pain relief

568. Some researchers believe that substance use disorders may result from
    A) poor physical coordination skills.
    B) enlarged ventricles.
    C) high blood glucose levels.
    D) a reward deficiency syndrome.

569. Which limbic system structure decreases in size and function as we age?
    A) amygdala
    B) hypothalamus
    C) hippocampus
    D) medulla

570. Janessa suffered a stroke that destroyed a specific part of her limbic system. Although she remembers events prior to her illness, she is unable to form new memories of her daily experiences. Janessa has most likely suffered damage to the
    A) thalamus.
    B) hippocampus.
    C) hypothalamus.
    D) amygdala.

571. The two cerebral hemispheres in which specialized work teams that enable our perceiving, thinking, and speaking are referred to as the
    A) cerebrum.
    B) frontal lobe.
    C) motor cortex.
    D) somatosensory cortex.

572. The thin surface layer of interconnected neural cells that covers the cerebrum is called the
    A) amygdala.
    B) corpus callosum.
    C) hippocampus.
    D) cerebral cortex.

573. Which region of the human brain best distinguishes us from other animals?
    A) corpus callosum
    B) cerebral cortex
    C) hippocampus
    D) amygdala

574. Which regions of the cerebral cortex are positioned closest to our eyes?
    A) temporal lobes
    B) frontal lobes
    C) parietal lobes
    D) occipital lobes

575. Which regions of the cerebral cortex lie at the back of the head and receive visual information?
    A) occipital lobes
    B) corpus callosum
    C) temporal lobes
    D) somatosensory cortex

576. The parietal lobes are to _____ as the occipital lobes are to _____.
    A) hearing; speaking
    B) sensing touch; seeing
    C) tasting; smelling
    D) speaking; seeing

577. Who discovered what is now called the motor cortex?
    A) Fritsch and Hitzig
    B) Foerster and Penfield
    C) Delgado
    D) Anderson

578. An area at the rear of the frontal lobes that controls voluntary movements is called the
    A) somatosensory cortex.
    B) motor cortex.
    C) corpus callosum.
    D) frontal association area.

579. Direct stimulation of areas within 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.

580. Stimulating the left side of the brain will cause movement on the right side of the body. This indicates that the
    A) somatosensory cortex is responsible for limb movements.
    B) motor cortex on the right side of the brain controls movements of specific body parts on the right side of the body.
    C) association areas of the brain control the movements of all body parts.
    D) motor cortex on the left side of the brain controls movements of specific body parts on the opposite side of the body.

581. Which of the following body parts is associated with the greatest amount of brain tissue in the motor cortex?
A) hands
B) mouth
C) feet
D) legs

582. To trigger a person's hand to make a fist, José Delgado stimulated the individual's
A) motor cortex.
B) hippocampus.
C) somatosensory cortex.
D) corpus callosum.

583. A 25-year-old man with paralysis was able to mentally control a TV, draw shapes on a computer screen, and play video games as a result of a small chip with 100 microelectrodes being implanted into his
A) motor cortex.
B) somatosensory cortex.
C) parietal lobes.
D) association areas.

584. The somatosensory cortex is located in the _____ lobes.
A) parietal
B) temporal
C) frontal
D) occipital

585. The brain devotes more tissue within the _____ for body areas that are highly sensitive to touch such as the lips.
A) corpus callosum
B) temporal lobes
C) somatosensory cortex
D) hippocampus

586. The _____ the body region, the _____ the somatosensory cortex area devoted to it.
A) more sensitive; smaller
B) less sensitive; larger
C) less sensitive; smaller
D) more sensitive; larger

587. If a neurosurgeon directly stimulated parts of your somatosensory cortex, which of the following would you most likely experience?
    A) indistinct odors
    B) flashes of light
    C) repetitive sounds
    D) touches on the face

588. Which of the following is located in the occipital lobes?
    A) somatosensory cortex
    B) auditory cortex
    C) motor cortex
    D) visual cortex

589. As you read this question, any visual information you are receiving is going to the visual cortex in your
    A) frontal lobes.
    B) occipital lobes.
    C) parietal lobes.
    D) temporal lobes.

590. Which of the following is located in the temporal lobes?
    A) visual cortex
    B) auditory cortex
    C) motor cortex
    D) the somatosensory cortex

591. 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.

592. As you walk through the grocery store, you hear music playing on the intercom. The sound is processed by your auditory cortex in your
    A) frontal lobes.
    B) occipital lobes.
    C) parietal lobes.
    D) temporal lobes.

593. Regions of the cerebral cortex involved primarily in higher mental functions such as learning are called
    A) the motor cortex.
    B) the corpus callosum.
    C) association areas.
    D) the somatosensory cortex.

594. The cortical regions that are NOT directly involved in sensory or motor functions are known as
    A) the hippocampus.
    B) frontal lobes.
    C) association areas.
    D) parietal lobes.

595. The process of comparing currently experienced visual input with past visual memories takes place in
    A) the thalamus.
    B) the cerebellum.
    C) association areas.
    D) the corpus callosum.

596. Association areas are located
    A) frontal lobes.
    B) occipital lobes.
    C) parietal lobes.
    D) temporal lobes.

597. What led to the myth that humans use only 10 percent of our brains?
    A) Scientists electrically probed the association areas and received no response.
    B) Scientists noticed that when they severed the corpus callosum of most patients, it had no effect on their behavior.
    C) Phineas Gage's horrible accident had no detectable effect on his brain.
    D) This is not a myth; humans use only 10 percent of the brain.

598. The most amount of the brain devoted to association areas is found in a
    A) rat.
    B) chimpanzee.
    C) dog.
    D) human.

599. Which of the following is NOT a function of the brain's association areas?
    A) They link information with stored memories.
    B) They interpret sensory information.
    C) They are inactive brain tissue in most species.
    D) They act on incoming sensory information.

600. Damage to the association areas in the prefrontal cortex is most likely to interfere with the ability to
    A) formulate plans.
    B) recognize familiar faces.
    C) understand word meanings.
    D) recognize familiar voices.

601. 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

602. Most people would not advocate pushing one person in front of a runaway trolley to save five others. But those with damage to the _____ are often untroubled by such an ethical dilemma.
    A) hippocampus
    B) corpus callosum
    C) somatosensory cortex
    D) frontal lobe association areas

603. The region of your cerebral cortex that enables you to visually recognize your own mother's face is
    A) the cerebellum.
    B) the somatosensory cortex.
    C) the corpus callosum.
    D) an association area.

604. 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) brain fissures.
    B) neurogenesis.
    C) MRI scans.
    D) plasticity.

605. Deaf people's enhanced peripheral and motion-detection vision has been attributed in part to
    A) auditory hallucinations.
    B) lateralization.
    C) plasticity.
    D) neurogenesis.

606. After Terry lost a finger in an industrial accident, the area of his somatosensory cortex devoted to receiving input from that finger gradually became very responsive to sensory input from his adjacent fingers. This best illustrates
    A) lateralization.
    B) neurogenesis.
    C) plasticity.
    D) brain fissuring.

607. Neurogenesis refers to
    A) severing of the corpus callosum.
    B) the formation of new neurons.
    C) rewiring the brain.
    D) stimulating the parietal lobe to produce a feeling of wanting to move an upper limb.

608. The brain is most likely to compensate for a loss of neurons by
    A) generating new neural cells in the brain.
    B) increasing the speed of neural impulses.
    C) inhibiting activity in the association areas.
    D) decreasing the production of stem cells.

609. Master stem cells that can develop into any type of brain cell have been discovered in the human
    A) embryo.
    B) corpus callosum.
    C) association areas.
    D) somatosensory cortex.

610. What do brain plasticity and neurogenesis have in common?
    A) Both abilities are ongoing processes in development.
    B) Both abilities result from functional connectivity.
    C) Both abilities help the brain modify itself after experiencing damage.
    D) Both abilities are controlled by the hypothalamus.

611. The ability to recognize faces with the right hemisphere but not with the left hemisphere best illustrates
    A) brain fissures.
    B) neurogenesis.
    C) plasticity.
    D) lateralization.

612. The large band of neural fibers connecting the two brain hemispheres is called the
    A) somatosensory cortex.
    B) temporal lobe.
    C) hippocampus.
    D) corpus callosum.

613. Information is most quickly transmitted from one cerebral hemisphere to the other by the
    A) corpus callosum.
    B) motor cortex.
    C) association areas.
    D) somatosensory cortex.

614. Split-brain patients have had their _____ surgically cut.
    A) hippocampus
    B) corpus callosum
    C) somatosensory cortex
    D) frontal lobes

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

616. 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.

617. 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 split-brain 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.

618. 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.

619. People who can hear usually process their speaking with the _____ hemisphere. Deaf people usually process their language signing with the _____ hemisphere.
    A) right; left
    B) left; right
    C) right; right
    D) left; left

620. 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) corpus callosum.
    B) cerebellum.
    C) right hemisphere.
    D) motor cortex.

621. People's reactions to our genetically influenced traits constitute part of our
    A) epigenetic marks.
    B) environment.
    C) genome.
    D) natural selection.

622. External influences on development such as social support are said to constitute our
    A) genome.
    B) epigenetic marks.
    C) environment.
    D) natural selection.

623. The impact of a mother's healthy food consumption on the prenatal development of her offspring best illustrates
    A) dizygotic development.
    B) natural selection.
    C) environmental influence.
    D) an epigenetic mark.

624. Karen has blue eyes, whereas Tom's eyes are brown. Their different eye colors can best be attributed to
    A) behavior genetics.
    B) heredity.
    C) epigenetic molecules.
    D) shared family environments.

625. Behavior geneticists are most interested in assessing the extent to which heredity and environment contribute to our
    A) shared human genome.
    B) epigenetic marks.
    C) reproductive capacities.
    D) individual differences.

626. Assessing the relative effects of nature and nurture on individual differences in personality would be of most direct interest to
    A) evolutionary psychologists.
    B) genome researchers.
    C) behavior geneticists.
    D) epigeneticists.

627. A human egg contains
    A) 23 chromosomes.
    B) 23 genes.
    C) 46 chromosomes.
    D) 46 genes.

628. The threadlike structures that contain genes are called
    A) organic methyl molecules.
    B) epigenetic marks.
    C) chromosomes.
    D) genomes.

629. Chromosomes are located within human
    A) bone cells.
    B) genes.
    C) neurotransmitters.
    D) DNA.

630. A gene is a small segment of a(n)
    A) synapse.
    B) neurotransmitter.
    C) DNA molecule.
    D) epigenetic mark.

631. Norman is convinced that his son looks just like him and that his son inherited most of his genes from him. What would you say to Norman?
    A) You are correct. Boys always inherit more genes from their father.
    B) You are incorrect. Boys usually inherit more genes from their mother.
    C) You are correct. Fathers always have the dominate genes.
    D) You are incorrect. All children inherit half their genes from their fathers and half from their mothers.

632. You, like every other human, have about _____ genes.
A) 5000
B) 10,000
C) 15,000
D) 20,000

633. Genes provide the code for the production of
A) shared family environments.
B) proteins.
C) epigenetic molecules.
D) genomes.

634. What does it mean when a gene is said to be active?
A) That gene is expressed.
B) The gene contains DNA.
C) The gene is hereditary.
D) The gene is based on environmental influences.

635. The complete set of genetic instructions in an organism's chromosomes is called the
A) double helix.
B) DNA molecule.
C) genome.
D) epigenetic mark.

636. The nucleus of each cell of your body contains
A) DNA molecules.
B) chromosomes.
C) genes.
D) all of these elements.

637. Our genetic predispositions help to explain
A) our shared human nature but not our human diversity.
B) our human diversity but not our shared human nature.
C) neither our shared human nature nor our human diversity.
D) both our shared human nature and our human diversity.

638. Unlike fraternal twins, identical twins are described as
    A) extraverted.
    B) dizygotic.
    C) epigenetic.
    D) monozygotic.

639. Twin brothers or twin sisters who develop from a single fertilized egg that splits in two are called _____ twins.
    A) fraternal
    B) identical
    C) epigenetic
    D) dizygotic

640. Fraternal twins originate from the fertilization of
    A) a single egg cell by a single sperm cell.
    B) two egg cells by a single sperm cell.
    C) a single egg cell by two sperm cells.
    D) two egg cells by two sperm cells.

641. Matt becomes emotionally upset frequently and quickly. Matt's reactions most clearly illustrate
    A) extraversion.
    B) neuroticism.
    C) an epigenetic mark.
    D) high serotonin levels.

642. Compared with identical twins, fraternal twins are
    A) more likely to be the same sex and more likely to be similar in extraversion.
    B) more likely to be the same sex and less likely to be similar in extraversion.
    C) less likely to be the same sex and less likely to be similar in extraversion.
    D) less likely to be the same sex and equally likely to be similar in extraversion.

643. Genetic influences on personality traits are most clearly highlighted by comparing _____ with _____.
    A) identical twins raised together; identical twins raised apart
    B) fraternal twins raised together; identical twins raised apart
    C) identical twins raised together; fraternal twins raised together
    D) fraternal twins raised apart; identical twins raised together

644. Identical twins raised apart have _____ similar personalities than identical twins raised together and _____ similar personalities than fraternal twins raised apart.
A) more; more
B) less; less
C) more; less
D) less; more

645. Studies of identical twins who had been raised apart have most clearly increased scientific appreciation for the impact of _____ on personality development.
A) natural selection
B) epigenetic marks
C) free-floating stress hormones
D) genetic influences

646. Sandra and her identical twin sister Debra were separated at birth. Which of the following statements is true about Sandra and Debra?
A) They are likely to be very alike in personality, intelligence, heart rate, and brain waves.
B) They are no more genetically similar than ordinary siblings.
C) They developed from two separate fertilized eggs and shared a prenatal environment.
D) They developed from one single fertilized egg that split but did not share a prenatal environment.

647. One reason to be cautious about attributing the assessed personality similarities of separately raised identical twins to shared genes is that
A) home environments have less impact on personality than does peer pressure.
B) many separately raised identical twins were reunited prior to assessing their personalities.
C) epigenetic marks have a strong impact on personality development.
D) adopted children's personalities are highly similar to those of their adoptive parents.

648. Today's adults are taller and heavier than those of a century ago. The differences between these generational groups best illustrate the impact of
A) genetics.
B) nutrition.
C) epigenetic marks.
D) natural selection.

649. Identical twins separated at birth and raised apart would be most likely to have similar
A) epigenetic marks.
B) religious beliefs.
C) personality traits.
D) political views.

650. Paul and Jeff are biologically related non-twin siblings raised in the same home environment. Susan and Cathy are biologically unrelated children adopted at birth and raised as siblings in the same home environment. People are likely to _____ the personality similarities of Paul and Jeff and _____ the personality similarities of Susan and Cathy.
A) overestimate; underestimate
B) underestimate; overestimate
C) underestimate; underestimate
D) overestimate; overestimate

651. In personality traits such as outgoingness, people who have been adopted are
A) more similar to their biological parents than to their adoptive parents.
B) more similar to their adoptive parents than to their biological parents.
C) very similar to their biologically unrelated siblings who grew up in the same home.
D) very similar to their biologically related non-twin siblings who grew up in the same home.

652. Adoptive parents are most likely to influence the _____ of their adopted children.
A) political attitudes
B) genome
C) extraversion
D) personality traits

653. Adopted children grow up to be
A) more self-giving than average.
B) less psychologically disordered than average.
C) more extraverted than average.
D) less aware of their unique personality traits than average.

654. The diversity of human traits is most clearly enabled by our shared
A) moral values.
B) dizygotic development.
C) epigenetic molecules.
D) adaptive capacity.

655. The impact of genes on observable traits can vary in different environments. Thus, genes are said to be
    A) free-floating.
    B) dizygotic.
    C) self-regulating.
    D) epigenetic.

656. In terms of the study of genes and environment, *interaction* is defined as
    A) a random error in gene replication that leads to a change.
    B) the interplay that occurs when the effect of one factor depends on another factor.
    C) the principle that inherited traits that better enable an organism to survive and reproduce in an environment will be passed on to the next generation.
    D) the study of the molecular mechanisms by which environments can influence genetic ex-pression.

657. Some genetically influenced traits are expressed in some environments but not in others. This best illustrates the _____ of genes and environments.
    A) heritability
    B) natural selection
    C) dizygotic impact
    D) interaction

658. Our selective exposure to those life experiences that are best suited to our unique personality traits best illustrates the interaction of
    A) evolution and natural selection.
    B) nature and nurture.
    C) heredity and epigenetics.
    D) genes and chromosomes.

659. Because Marla is the first girl in her fourth-grade class to sexually mature, she is sometimes teased and rejected by her classmates. Marla's sense of social isolation and embarrassment result from the interaction of
    A) dizygotic development and epigenetic marks.
    B) evolution and natural selection.
    C) genes and chromosomes.
    D) nature and nurture.

660. Epigenetics is the study of environmental influences on _____ that occur without a DNA change.
A) natural selection
B) personality traits
C) gene expression
D) stress hormones

661. Diet and stress can affect the _____ that regulate gene expression.
A) neurotransmitters
B) mutations
C) epigenetic molecules
D) nerve cells

662. Which of the following would likely prevent DNA from producing the proteins coded by a gene?
A) an epigenetic mark
B) neurotransmitters
C) the human genome
D) sex chromosomes

663. The study of how our behavior and mind have changed in adaptive ways over time due to natural selection is called
A) epigenetics.
B) evolutionary psychology.
C) behavior genetics.
D) genome research.

664. Charles Darwin advanced the principle of
A) the double helix.
B) the Big Bang theory.
C) epigenetics.
D) natural selection.

665. Evolutionary psychologists most clearly emphasize that environmentally adaptive behaviors are those that have promoted
A) reproductive success.
B) personal happiness.
C) cultural diversity.
D) epigenetic marks.

666. John has been raising small lizards for quite some time and has noticed that lately, the newborn lizards have much longer legs than the previous ones. This is most likely an example of
A) natural selection.
B) epigenetics.
C) behavior genetics.
D) self-regulation.

667. If a genetic predisposition to fear darkness contributes to reproductive success, that trait will likely be passed on to subsequent generations. This best illustrates
A) an epigenetic mark.
B) a mutation.
C) behavior genetics.
D) natural selection.

668. Evolutionary psychologists most clearly emphasize that population characteristics may change as a result of the reproductive success of those whose behaviors are
A) environmentally adaptive.
B) genetically unique.
C) culturally diverse.
D) epigenetic.

669. Evolutionary psychologists are most directly concerned with the impact of _____ on behavior.
A) mutations
B) environmental influences
C) genetic predispositions
D) domestication

670. Evolutionary psychology would be most helpful for understanding the _____ of human aggression.
A) social causes
B) reproductive advantages
C) cross-cultural variations
D) remedial treatments

671. To produce sheepdogs that become very adept at sheepherding, dog breeders are most likely to make use of
    A) gene splicing.
    B) cloning.
    C) selective mating.
    D) epigenetic marks.

672. From an evolutionary perspective, which of the following is the clearest contributor to human fitness?
    A) neuroticism
    B) epigenetic marks
    C) adaptive flexibility
    D) free-floating stress hormones

673. Mutations result from random errors in
    A) brain development.
    B) gene replication.
    C) natural selection.
    D) neural transmission.

674. Our adaptive flexibility in responding to different environments contributes to our ability to survive and reproduce, that is, to our
    A) epigenetics.
    B) neuroticism.
    C) fitness.
    D) domestication.

675. Early women who were genetically predisposed to avoid bitter-tasting foods, especially when experiencing nausea during pregnancy, were most likely to survive and contribute their genetically based predispositions to later generations. This best illustrates
    A) domestication.
    B) natural selection.
    C) epigenetics.
    D) neuroticism.

676. If a genetically based mating preference for people who are physically attractive contributes to reproductive success, that trait will be passed on to subsequent generations. This best illustrates
A) domestication.
B) natural selection.
C) an epigenetic mark.
D) behavior genetics.

677. Evolutionary psychology would be most likely to suggest that human preferences for sweets and fats
A) have hindered sexual reproduction.
B) are genetically predisposed.
C) vary widely across cultures.
D) are epigenetic marks.

678. An example of the second Darwinian revolution is the
A) application of epigenetics to psychology.
B) application of evolutionary principles to psychology.
C) application of behavior genetics to psychology.
D) investigation of the interaction of genetics and environment to psychology.

679. The principles of evolutionary psychology would suggest that parents are genetically predisposed to experience the strongest grief over the deaths of their
A) biologically related sons.
B) biologically related daughters.
C) adopted sons.
D) adopted daughters.

Answer Key

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19. A
20. A
21. A
22. D
23. C
24. D
25. B
26. A
27. D
28. D
29. C
30. C
31. A
32. C
33. A
34. C
35. A
36. D
37. C
38. C
39. B
40. C
41. B
42. B
43. D
44. B

45. C
46. B
47. C
48. D
49. D
50. A
51. D
52. C
53. D
54. B
55. B
56. B
57. A
58. C
59. A
60. B
61. B
62. C
63. B
64. B
65. C
66. D
67. C
68. C
69. A
70. D
71. B
72. C
73. D
74. C
75. D
76. B
77. C
78. D
79. D
80. B
81. D
82. A
83. D
84. C
85. C
86. C
87. B
88. C
89. C
90. D

91. D
92. C
93. B
94. D
95. A
96. C
97. A
98. B
99. B
100. A
101. D
102. B
103. C
104. D
105. D
106. C
107. B
108. C
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112. C
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115. C
116. B
117. B
118. D
119. A
120. A
121. A
122. D
123. D
124. B
125. B
126. A
127. A
128. C
129. C
130. B
131. C
132. C
133. C
134. A
135. D
136. B

137. D
138. B
139. D
140. C
141. B
142. B
143. C
144. B
145. B
146. C
147. A
148. B
149. D
150. C
151. C
152. B
153. C
154. A
155. C
156. A
157. B
158. B
159. D
160. B
161. C
162. C
163. B
164. A
165. B
166. A
167. B
168. A
169. C
170. B
171. C
172. C
173. C
174. B
175. B
176. D
177. A
178. C
179. D
180. B
181. D
182. A

183. A
184. A
185. D
186. B
187. B
188. C
189. D
190. B
191. D
192. C
193. D
194. D
195. D
196. A
197. D
198. D
199. D
200. C
201. A
202. D
203. D
204. D
205. D
206. C
207. B
208. A
209. B
210. D
211. D
212. D
213. A
214. B
215. B
216. C
217. C
218. A
219. A
220. C
221. C
222. B
223. D
224. D
225. B
226. B
227. C
228. C

229. C
230. C
231. D
232. C
233. A
234. B
235. B
236. C
237. D
238. D
239. D
240. C
241. D
242. D
243. D
244. D
245. B
246. C
247. C
248. D
249. A
250. D
251. A
252. A
253. A
254. C
255. A
256. A
257. D
258. A
259. B
260. B
261. C
262. D
263. B
264. B
265. B
266. A
267. B
268. D
269. B
270. D
271. D
272. C
273. B
274. B

275. B
276. A
277. A
278. C
279. D
280. D
281. B
282. C
283. D
284. A
285. C
286. D
287. C
288. A
289. D
290. A
291. B
292. D
293. A
294. B
295. D
296. A
297. D
298. B
299. C
300. C
301. A
302. D
303. D
304. D
305. C
306. C
307. C
308. A
309. A
310. C
311. D
312. D
313. B
314. B
315. B
316. C
317. B
318. C
319. D
320. D

321. B
322. D
323. C
324. C
325. C
326. D
327. C
328. C
329. B
330. C
331. C
332. B
333. C
334. B
335. D
336. B
337. B
338. A
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