

***Introduction to Brain and Behavior 6th edition Kolb
Test Bank***

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Chapter 02: Multiple Choice

1. The cerebellum contains _____ of all the neurons in the adult human brain.

- a. 20 percent
- b. 50 percent
- c. 10 percent
- d. 80 percent

ANSWER: d

2. Neural agenesis refers to:

- a. an injury to a brain structure.
- b. the degeneration of a structure.
- c. the failure of a structure to develop.
- d. the creation of a brain structure.

ANSWER: c

3. If a tree falls in the forest, does it make a sound if no one is present?

- a. Yes, because sound is a physical phenomenon.
- b. Yes, because if you record the noise and play it again later, you will hear it.
- c. No, because sound is a fabrication of the human brain.
- d. This is an unanswerable philosophical question.

ANSWER: c

4. Phenotypic plasticity refers to:

- a. how an organism's genotype can be influenced by environmental factors.
- b. how an organism's genetics can be influenced by its nervous system.
- c. the study of nervous system plasticity.
- d. None of the answers is correct.

ANSWER: a

5. The CNS includes the _____, whereas the PNS includes the _____.

- a. brain and autonomic nervous system; spinal cord and somatic nervous system
- b. spinal cord and autonomic nervous system; brain and somatic nervous system
- c. spinal cord and brain; autonomic nervous system and somatic nervous system
- d. somatic nervous system and brain; spinal cord and autonomic nervous system

ANSWER: c

6. The somatic nervous system includes the _____, whereas the autonomic nervous system includes the _____.

- a. sympathetic and parasympathetic divisions; cranial nerves and spinal nerves
- b. brain and spinal cord; cranial nerves and spinal nerves
- c. sympathetic and parasympathetic divisions; brain and spinal cord
- d. cranial nerves and spinal nerves; sympathetic and parasympathetic divisions

ANSWER: d

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7. The subdivision of the nervous system that controls the gut is called the:

- a. somatic nervous system.
- b. enteric nervous system.
- c. digestive nervous system.
- d. autonomic nervous system.

ANSWER: b

8. The term *afferent* refers to _____ signals.

- a. incoming
- b. outgoing
- c. different
- d. similar

ANSWER: a

9. Efferent is to afferent as:

- a. brain is to spinal cord.
- b. sensory is to motor.
- c. motor is to sensory.
- d. incoming is to outgoing.

ANSWER: c

10. Afferent is to efferent as:

- a. out is to in.
- b. top is to bottom.
- c. in is to out.
- d. bottom is to top.

ANSWER: c

11. Moving from superficial layers to deep layers, in what order are the meninges found?

- a. dura mater, arachnoid layer, pia mater
- b. pia mater, arachnoid layer, dura mater
- c. dura mater, pia mater, arachnoid layer
- d. pia mater, dura mater, arachnoid layer

ANSWER: a

12. Brain nomenclature can be very confusing. This is because:

- a. many structures have several names.
- b. research on the brain includes scientists of many nationalities and languages.
- c. some structures were named using numbers.
- d. All of the answers are correct.

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ANSWER: d

13. Structures atop the brain or a structure within the brain are:

- a. lateral.
- b. ventral.
- c. medial.
- d. dorsal.

ANSWER: d

14. The ventral portion of a structure is sometimes called:

- a. superior.
- b. inferior.
- c. dorsal.
- d. medial.

ANSWER: b

15. Rostral is to caudal as:

- a. superior is to inferior.
- b. dorsal is to ventral.
- c. medial is to lateral.
- d. anterior is to posterior.

ANSWER: d

16. Coronal section is to horizontal section as:

- a. frontal view is to dorsal view.
- b. medial view is to frontal view.
- c. frontal view is to medial view.
- d. dorsal view is to medial view.

ANSWER: a

17. What best characterizes the composition of cerebrospinal fluid?

- a. sodium chloride and other salts
- b. essential amino acids
- c. glucocorticoids
- d. simple sugars and small lipids

ANSWER: a

18. Cerebrospinal fluid (CSF) flows between the:

- a. arachnoid layer and pia mater.
- b. dura mater and pia mater.
- c. dura mater and arachnoid layer.

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d. superficial layer and deep layer.

ANSWER: a

19. The functions of the temporal lobes lie mainly in:

- a. decision making.
- b. hearing, language, and music.
- c. sensory processing and directing movements toward objects.
- d. vision.

ANSWER: b

20. Following a brain injury, Greg has difficulty understanding language and music. He is most likely to have suffered damage to his:

- a. frontal lobe.
- b. temporal lobe.
- c. occipital lobe.
- d. parietal lobe.

ANSWER: b

21. The frontal lobe is responsible for controlling:

- a. decision making.
- b. hearing, language, and music.
- c. vision.
- d. sensory processing and directing movements toward objects.

ANSWER: a

22. Following a brain injury, Suzanne experiences difficulty with problem solving and decision making. She is most likely to have suffered an injury to her:

- a. parietal lobe.
- b. occipital lobe.
- c. frontal lobe.
- d. temporal lobe.

ANSWER: c

23. The parietal lobe primarily controls:

- a. vision.
- b. hearing, language, and music.
- c. decision making.
- d. sensory processing and directing movements toward objects.

ANSWER: d

24. Soon after experiencing a stroke, Jim experiences difficulty with directing movements toward objects. The stroke is most likely to have occurred in his:

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- a. frontal lobe.
- b. temporal lobe.
- c. occipital lobe.
- d. parietal lobe.

ANSWER: d

25. The occipital lobe is responsible for:

- a. sensory processing and directing movements toward objects.
- b. decision making.
- c. visual processing.
- d. hearing, language, and music.

ANSWER: c

26. During a recent car accident, Allison suffered a brain injury that left her blind even though her eyes are working fine. She is most likely to have suffered damage to her:

- a. occipital lobe.
- b. frontal lobe.
- c. temporal lobe.
- d. parietal lobe.

ANSWER: a

27. Sulci are:

- a. found only in the cerebellum.
- b. found only in the cerebrum.
- c. the cracks between the bumps on the brain.
- d. the bumps on the surface of the brain.

ANSWER: c

28. Gyri are:

- a. bumps on the surface of the cortex.
- b. cracks on the surface of the cortex.
- c. deformities on the surface of the cortex.
- d. only found in the spinal cord.

ANSWER: a

29. Which of the following correctly describes the possible suite of symptoms associated with meningitis?

- a. severe headache, stiff neck, convulsions
- b. facial paralysis, limb paralysis, severe headache
- c. aggressiveness, mood swings, personality changes
- d. convulsions, vomiting, confusion

ANSWER: a

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30. Sulcus is to gyrus as:
- a. crack is to bump.
 - b. bump is to crack.
 - c. ridge is to mountain.
 - d. crack is to crevasse.

ANSWER: a

31. What is the term for an infection of the brain caused by invading viruses or microorganisms?
- a. encephalitis
 - b. meningitis
 - c. craniitis
 - d. hemispheritis

ANSWER: a

32. Which item is NOT a cerebral artery that acts as a major supplier to the cerebrum?
- a. anterior
 - b. superior
 - c. middle
 - d. posterior

ANSWER: b

33. The artery that provides blood to the lateral, temporal, and frontal lobes is the _____ cerebral artery.
- a. anterior
 - b. middle
 - c. posterior
 - d. inferior

ANSWER: b

34. The posterior cerebral artery provides blood to the _____ lobe.
- a. parietal
 - b. frontal
 - c. occipital
 - d. exterior

ANSWER: c

35. A disruption of the blood supply to a brain region causes:
- a. meningitis.
 - b. encephalitis.
 - c. a stroke.
 - d. cerebral agenesis.

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ANSWER: c

36. _____ is mainly composed of cell bodies and capillaries.

- a. Reticular matter
- b. Gray matter
- c. The corpus callosum
- d. White matter

ANSWER: b

37. _____ is (are) mainly composed of nerve fibers with fatty coverings.

- a. Cerebral aqueducts
- b. Ventricles
- c. White matter
- d. Gray matter

ANSWER: c

38. CSF is made in the:

- a. pia mater.
- b. dura mater.
- c. ventricles.
- d. arachnoid layer.

ANSWER: c

39. The large cavities inside the brain are known as:

- a. ventricles and are filled with CSF.
- b. ventricles and are filled with blood.
- c. the arachnoid layer and are filled with CSF.
- d. the arachnoid layer and are filled with blood.

ANSWER: a

40. Which of the following is a function of CSF?

- a. acting as a shock absorber to the brain
- b. allowing certain compounds access
- c. helping the brain excrete metabolic wastes from the brain
- d. All of the above are functions of CSF.

ANSWER: a

41. Ischemic stroke is caused by:

- a. a clot.
- b. a broken blood vessel.
- c. meningitis.

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d. encephalitis.

ANSWER: a

42. A hemorrhagic stroke is caused by:

- a. a blood clot.
- b. a ruptured blood vessel.
- c. an embolism.
- d. All of the answers are correct.

ANSWER: b

43. Tissue plasminogen activator (t-PA) is effective for treating:

- a. ischemic stroke.
- b. hemorrhagic stroke.
- c. meningitis.
- d. All of the answers are correct.

ANSWER: a

44. When observing a sagittal brain section at the midline, what is the prominent feature composed of white matter?

- a. corpus callosum
- b. ventricles
- c. cingulate cortex
- d. hippocampus

ANSWER: a

45. Cutting the brain from front to back will give a _____ view.

- a. coronal
- b. frontal
- c. horizontal
- d. sagittal

ANSWER: d

46. What does the behavior of octopi tell us about nervous system organization and intelligent behavior?

- a. Only vertebrates have nervous systems complex enough for intelligent behavior.
- b. Invertebrates are incapable of learning complex behaviors.
- c. Intelligent behavior does not require a vertebrate nervous system organization.
- d. Intelligent behavior is linked to one type of nervous system.

ANSWER: c

47. The role of glial cells is primarily to:

- a. carry out information processing in the brain.

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- b. send signals from one brain region to another.
- c. modulate the activity of neurons.
- d. process sensory input.

ANSWER: c

48. CNS is to PNS as:

- a. neuron is to glia.
- b. gray matter is to white matter.
- c. nerve is to tract.
- d. tract is to nerve.

ANSWER: d

49. The prosencephalon is sometimes referred to as the:

- a. hindbrain.
- b. middle brain.
- c. auxiliary brain.
- d. front brain.

ANSWER: d

50. In the human brain the basal ganglia, limbic system, and olfactory bulbs are considered part of the:

- a. telencephalon.
- b. metencephalon.
- c. diencephalon.
- d. mesencephalon.

ANSWER: a

51. In the human brain the mesencephalon contains the:

- a. neocortex.
- b. cerebellum.
- c. tectum and tegmentum.
- d. medulla.

ANSWER: c

52. The thalamus and hypothalamus are considered part of the:

- a. myelencephalon.
- b. telencephalon.
- c. metencephalon.
- d. diencephalon.

ANSWER: d

53. Which of the following structures is NOT part of the metencephalon?

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- a. the cerebellum
- b. the pons
- c. the medulla
- d. None of the answers is correct.

ANSWER: c

54. Which of the following is NOT part of the hindbrain?

- a. the pons
- b. the tegmentum
- c. the reticular formation
- d. the medulla oblongata

ANSWER: b

55. Awakening from sleep is a function of the:

- a. pons.
- b. medulla.
- c. cerebellum.
- d. reticular formation.

ANSWER: d

56. The reticular formation is primarily made up of:

- a. gray matter only.
- b. white matter only.
- c. gray matter and white matter.
- d. None of the answers is correct.

ANSWER: c

57. The primary function of the cerebellum is:

- a. control of sleeping and waking.
- b. control of movement.
- c. control of heart rate and respiration.
- d. sensory processing.

ANSWER: b

58. Orienting responses (e.g., turning your head to locate the source of a sound) are controlled by the:

- a. pons.
- b. superior and inferior colliculi.
- c. cerebellum.
- d. diencephalon.

ANSWER: b

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59. The red nucleus, substantia nigra, and periaqueductal gray matter are parts of the:

- a. tectum.
- b. pons.
- c. tegmentum.
- d. reticular formation.

ANSWER: c

60. Regulation of breathing and the cardiovascular system is primarily controlled by the:

- a. pons.
- b. reticular activating system.
- c. medulla.
- d. cerebellum.

ANSWER: c

61. What are the functions of the superior and inferior colliculi, respectively?

- a. auditory and visual
- b. visual and auditory
- c. tactile and visual
- d. visual and tactile

ANSWER: b

62. Which of the following is part of the tegmentum?

- a. the tectum
- b. the substantia nigra
- c. the inferior colliculus
- d. the superior colliculus

ANSWER: b

63. The hypothalamus is NOT primarily involved in:

- a. motor movements.
- b. sleeping.
- c. emotional behavior.
- d. sensory input.

ANSWER: d

64. Sexual behavior is a primary function of the:

- a. thalamus.
- b. hypothalamus.
- c. gyrus fornicatus.
- d. red nucleus.

ANSWER: b

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65. The _____ acts as a sensory relay station for signals arriving from sensory receptors that are being sent to the cortex.

- a. pituitary
- b. pons
- c. hypothalamus
- d. thalamus

ANSWER: b

66. Thalamus is to hypothalamus as:

- a. sensory input is to body maintenance.
- b. body maintenance is to sensory input.
- c. sexual behavior is to sleeping.
- d. feeding is to endocrine function.

ANSWER: a

67. The lateral geniculate nucleus deals with:

- a. touch.
- b. hearing.
- c. olfaction.
- d. vision.

ANSWER: d

68. The primary function of the thalamus is:

- a. transmission of sensory inputs to the cortex.
- b. regulation of hormone function.
- c. regulation of sleeping and waking.
- d. control of orienting responses.

ANSWER: a

69. Which of the following is NOT part of the forebrain?

- a. the cortex
- b. the tectum
- c. the basal ganglia
- d. the limbic system

ANSWER: b

70. The basal ganglia primarily controls:

- a. decision making.
- b. voluntary movement.
- c. learning and memory.

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d. processing of sound.

ANSWER: b

71. The part of the cortex that constructs a perceptual world and responds to that world is the:

- a. limbic cortex.
- b. cingulate cortex.
- c. neocortex.
- d. parahippocampal cortex.

ANSWER: c

72. Which of the following would likely occur if an individual's hippocampus were destroyed or damaged significantly?

- a. The person would have problems with navigation and word finding.
- b. The person would lose motor functions of their limbs.
- c. The person would have difficulty remembering individuals who are close to him or her.
- d. The person would not be able to speak.

ANSWER: a

73. What is the difference between the neocortex and the allocortex?

- a. The neocortex controls motivational and emotional states, while the allocortex constructs a perceptual world and responds to that world.
- b. The neocortex is part of the forebrain, while the allocortex is part of the hindbrain.
- c. The allocortex controls motivational and emotional states, while the neocortex constructs a perceptual world and responds to that world.
- d. The allocortex is part of the forebrain, while the neocortex is part of the hindbrain.

ANSWER: c

74. The allocortex contains which of the following structures?

- a. the hippocampus and the amygdala
- b. the hippocampus and the hypothalamus
- c. the hypothalamus and the thalamus
- d. the diencephalon and the amygdala

ANSWER: a

75. Why is the olfactory system unique among human senses?

- a. The olfactory system is part of the limbic system.
- b. The olfactory system is almost entirely a forebrain structure.
- c. The olfactory system is almost entirely a hindbrain structure.
- d. The olfactory system is one of the newest senses to have evolved in animals.

ANSWER: b

76. Deficits in processing basic visual information (e.g., luminance) are caused by damage to the:

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- a. frontal lobe.
- b. parietal lobe.
- c. occipital lobe.
- d. temporal lobe.

ANSWER: c

77. A person who has trouble locating the source of stimulation on the skin most likely has damage to the:

- a. temporal lobe.
- b. parietal lobe.
- c. occipital lobe.
- d. frontal lobe.

ANSWER: b

78. Trouble recognizing sounds is most commonly associated with damage to the:

- a. parietal lobe.
- b. frontal lobe.
- c. occipital lobe.
- d. temporal lobe.

ANSWER: d

79. Following a brain injury Steven has trouble organizing himself and has difficulty formulating plans to accomplish goals. Steven is most likely to have damaged his:

- a. frontal lobe.
- b. temporal lobe.
- c. parietal lobe.
- d. occipital lobe.

ANSWER: a

80. Six layers of gray matter on top of a layer of white matter would describe the:

- a. limbic cortex.
- b. basal ganglia.
- c. neocortex.
- d. cingulate cortex.

ANSWER: c

81. Why is the neocortex unlike most other structures in the brain?

- a. It is connected to virtually all other parts of the brain.
- b. It is not connected to any other part of the brain.
- c. It operates independently of other cranial structures.
- d. It has only one thick layer of tissue, compared to other structures' many layers.

ANSWER: a

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82. Imagine that you see a tree that you think looks like a heart. What type of cortical activity is this?
- a. down-top processing
 - b. top-down processing
 - c. neocortical processing
 - d. temporal processing

ANSWER: b

83. Cortical regions:
- a. have the same density of cell layers.
 - b. have different specific chemical characteristics.
 - c. when stained look the same across the various areas.
 - d. have very specific functions and rarely interrelate.

ANSWER: b

84. Motor output signals are sent through layer(s) _____ of the cortex.
- a. V and VI
 - b. I to III
 - c. IV
 - d. II

ANSWER: a

85. Integrative functions are processed by layer(s) _____ of the cortex.
- a. V and VI
 - b. I to III
 - c. IV
 - d. All of the answers are correct.

ANSWER: b

86. Sensory inputs are transmitted through layer(s) _____ of the cortex.
- a. I to III
 - b. V and VI
 - c. IV
 - d. All of the answers are correct.

ANSWER: c

87. Which conceptual system processes memory and emotion?
- a. limbic system
 - b. basal ganglia
 - c. thalamus
 - d. parietal lobe

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ANSWER: a

88. The caudate nucleus and the putamen are part of the:

- a. basal ganglia.
- b. limbic system.
- c. olfactory system.
- d. hindbrain.

ANSWER: a

89. Parkinson disease and Tourette syndrome are neurological diseases associated with the:

- a. cerebellum.
- b. frontal lobes.
- c. basal ganglia.
- d. thalamus.

ANSWER: c

90. The hippocampus and the amygdala are hypothesized to be part of which conceptual system?

- a. basal ganglia system
- b. limbic system
- c. olfactory system
- d. hindbrain system

ANSWER: b

91. The hippocampus and the cingulate cortex participate in performing _____ functions.

- a. digestive
- b. problem solving
- c. sexual
- d. memory

ANSWER: d

92. Why have some neuroscientists argued for retiring the term "limbic system"?

- a. The term is obsolete.
- b. No scientists have agreed which structures are a part of it.
- c. The idea of a limbic system suggests that cognition is separate from emotions and memories.
- d. All of the above are reasons.

ANSWER: d

93. Removal of the amygdala can lead to:

- a. changes in temperature regulation.
- b. sleep disruption.
- c. emotional changes.

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d. motor disruption.

ANSWER: c

94. Why does the olfactory bulb play a role in human sexual behavior?

- a. The VNO detects pheromones and relays this information to the amygdala and hypothalamus.
- b. The olfactory bulb is directly connected to the genitalia.
- c. The VNO contains pheromones.
- d. The olfactory bulb is very large in humans compared to other mammals.

ANSWER: a

95. There are _____ pairs of cranial nerves.

- a. 12
- b. 24
- c. 16
- d. 8

ANSWER: a

96. Sensory and motor signals from the head and neck travel through:

- a. lumbar sections of the spinal cord.
- b. sacral portions of the spinal cord.
- c. the cranial nerves.
- d. thoracic sections of the spinal cord.

ANSWER: c

97. Sensory and motor signals to the arms are sent through _____ sections of the spinal cord.

- a. sacral
- b. thoracic
- c. lumbar
- d. cervical

ANSWER: d

98. Sensory and motor signals from the head and neck are sent to _____ sections of the spinal cord.

- a. thoracic
- b. sacral
- c. lumbar
- d. None of the answers is correct.

ANSWER: d

99. Dermatomes are associated with the:

- a. peripheral nervous system
- b. somatic nervous system.

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- c. autonomic nervous system.
- d. cranial nervous system.

ANSWER: b

100. The law of Bell and Magendie states that the:

- a. dorsal spinal cord is motor and the ventral is sensory.
- b. medial spinal cord is motor and the lateral is sensory.
- c. dorsal spinal cord is sensory and the ventral is motor.
- d. medial spinal cord is sensory and the lateral is motor.

ANSWER: c

101. Motor output from the spinal cord travels via the:

- a. dorsal spinal cord.
- b. ventral spinal cord.
- c. medial spinal cord.
- d. lateral spinal cord.

ANSWER: b

102. Sensory input to the spinal cord travels via the:

- a. dorsal spinal cord.
- b. ventral spinal cord.
- c. medial spinal cord.
- d. lateral spinal cord.

ANSWER: a

103. What process is responsible for allowing some chickens to run around even after their heads have been cut off?

- a. integrating spinal functions
- b. integrating cranial functions
- c. parietal lobe functions
- d. malfunction of the cranial nerve

ANSWER: b

104. Why is Bell palsy diagnosed by exclusion?

- a. Bell palsy is caused by a wide array of factors.
- b. Many factors can cause facial paralysis.
- c. What causes Bell palsy is not yet understood.
- d. Bell palsy is extremely rare.

ANSWER: b

105. What would happen to a person whose ANS shut down?

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- a. The person would see no real change in daily activities.
- b. The person would become slightly ill.
- c. The person would become very ill.
- d. The person would die.

ANSWER: d

106. Why is the ENS sometimes called the second brain?

- a. It contains a wide range of neuron types.
- b. It contains the same chemical transmitters as the brain.
- c. It contains complex integrated neural circuits.
- d. All of the above.

ANSWER: d

107. Increases in heart rate and inhibition of digestion are controlled by the:

- a. sympathetic nervous system.
- b. parasympathetic nervous system.
- c. spinal nervous system.
- d. cranial nervous system.

ANSWER: a

108. The _____ nervous system works to help us "rest and digest," whereas the _____ nervous system helps initiate fight-or-flight responses.

- a. sympathetic; parasympathetic
- b. sympathetic; spinal
- c. parasympathetic; sympathetic
- d. somatic; parasympathetic

ANSWER: c

109. The vagus, facial, and oculomotor nerves are the primary components of the:

- a. cranial nervous system.
- b. sympathetic nervous system.
- c. parasympathetic nervous system.
- d. spinal nervous system.

ANSWER: c

110. The _____ contains a sheet of neurons lining the esophagus, stomach, small intestine, and colon.

- a. enteric nervous system (ENS)
- b. autonomic nervous system (ANS)
- c. somatic nervous system (SNS)
- d. central nervous system (CNS)

ANSWER: a

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111. What is the microbiome?

- a. the bacteria located in the mouth
- b. the micro environment of the brain
- c. the bacteria located in the gut
- d. the microorganisms of the skin

ANSWER: c

112. The microbiome can be involved in treatment of behavioral disorders through:

- a. prescription of antibiotics.
- b. reduction in the number of microorganisms in the ENS.
- c. administration of live microorganisms known as probiotics.
- d. removal of invasive microbiota from the body.

ANSWER: c

113. The nervous system stores information only if:

- a. it is a vertebrate nervous system.
- b. neural connections change.
- c. neural connections do not change.
- d. neurons fire at a certain frequency.

ANSWER: b

114. Language control is usually situated in the:

- a. same place on both hemispheres.
- b. different locations on each hemisphere.
- c. right hemisphere.
- d. left hemisphere.

ANSWER: d

115. The left hemisphere primarily controls functions on the _____ side of the body.

- a. contralateral
- b. left
- c. ipsilateral
- d. None of the answers is correct.

ANSWER: a

116. Spatial navigation is controlled by _____ of the brain.

- a. the left hemisphere
- b. both hemispheres
- c. the right hemisphere
- d. None of the answers is correct.

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ANSWER: c

117. The brain appears to have:

- a. mainly serial or hierarchical systems.
- b. mainly parallel systems.
- c. a combination of serial and parallel systems.
- d. parallel systems at lower levels and serial processing farther up.

ANSWER: c

118. The notion of segregation of sensory and motor functions in the nervous system was postulated by:

- a. François Magendie and David Bell.
- b. David Hubel.
- c. John Hughlings Jackson.
- d. Nige Torette.

ANSWER: a

119. Memory seems to be located:

- a. in the cingulate gyrus.
- b. in the hippocampus.
- c. throughout the brain.
- d. primarily in the temporal lobes.

ANSWER: c

120. Tourette syndrome and Parkinson disease result from:

- a. changes in balance between excitation and inhibition.
- b. malfunctioning of the microbiome.
- c. too much excitation and inhibition.
- d. the removal of the hippocampus.

ANSWER: a

Chapter 02: Essay

1. What are the major functions of the cerebellum?

ANSWER:

2. Identify the brain's primary functions.

ANSWER:

3. Define the terms *afferent* and *efferent*.

ANSWER:

4. List the meninges from the outside to the surface of the brain. Where does the cerebrospinal fluid flow?

ANSWER:

5. Your friend acquired frontal lobe damage in a car accident. What symptoms is that person likely to display?

ANSWER:

6. Differentiate between sulci and gyri.

ANSWER:

7. Differentiate between gray matter and white matter.

ANSWER:

8. What do the ventricles do?

ANSWER:

9. What is a stroke? What are the two major types of stroke?

ANSWER:

10. Differentiate between glial cells and neurons.

ANSWER:

11. List the primary divisions of the central nervous system.

ANSWER:

12. List the principal structures in the hindbrain. Which types of behavior is the hindbrain responsible for controlling?

ANSWER:

13. What are the major subdivisions and structures within the midbrain?

ANSWER:

14. What are the functions of the hypothalamus?

ANSWER:

15. What are the principal structures and functions of the diencephalon?

ANSWER:

Chapter 02: Essay

16. List the principal structures in the forebrain.

ANSWER:

17. How many layers are there in the cerebral cortex? What are the functions of each of the different cortical layers?

ANSWER:

18. Describe the disorders that occur when the basal ganglia are not functioning properly.

ANSWER:

19. Explain and describe some of the misgivings neuroscientists have about the limbic system as a theoretical construct.

ANSWER:

20. Define *dermatome* and match the five spinal cord segments to the correct dermatomes.

ANSWER:

21. What are the differences between the dorsal and ventral fibers of the spinal cord?

ANSWER:

22. If the enteric nervous system were malfunctioning, which body processes would be affected?

ANSWER:

23. Differentiate between the sympathetic and parasympathetic nervous systems.

ANSWER:

24. In relationship to the brain, what do the terms *symmetry* and *asymmetry* mean?

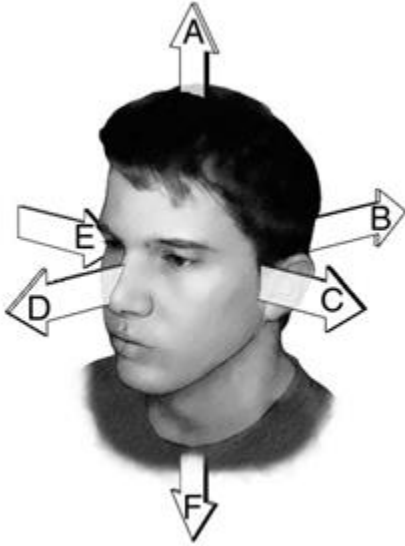
ANSWER:

25. What two pathways does the brain use to separate sensory input for object recognition and motor control?

ANSWER:

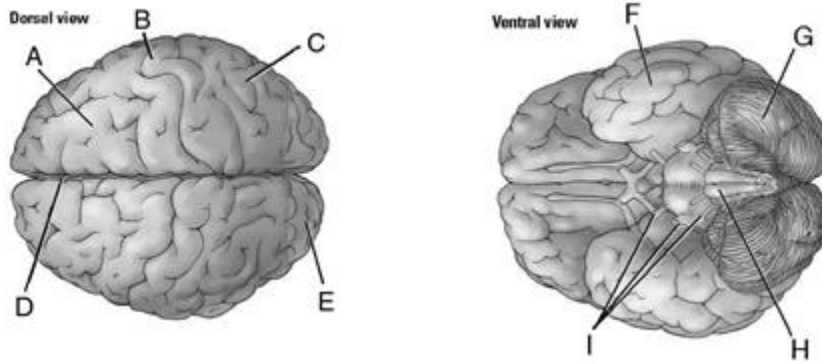
Chapter 02: Diagram

1. Match each letter to the correct anatomical term.



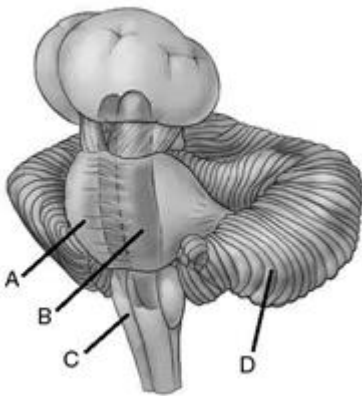
ANSWER: 1. F; 2. C; 3. A; 4. B; 5. E; 6. D

2. Match each letter to the correct location on the figure.



ANSWER: 1. E; 2. H; 3. F; 4. A; 5. D; 6. G; 7. I; 8. B; 9. C

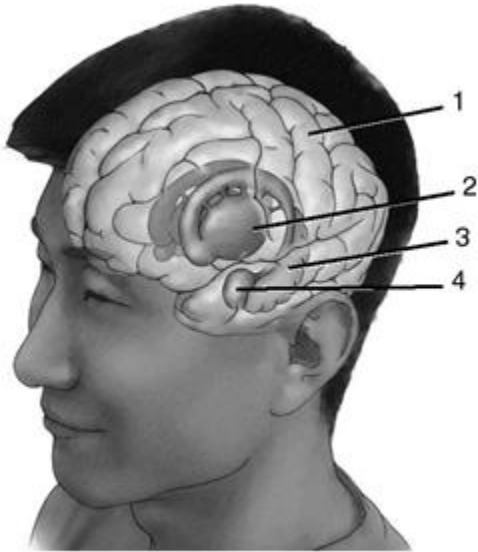
3. Locate the structures on the figure.



ANSWER: 1. D; 2. C; 3. B; 4. A

Chapter 02: Diagram

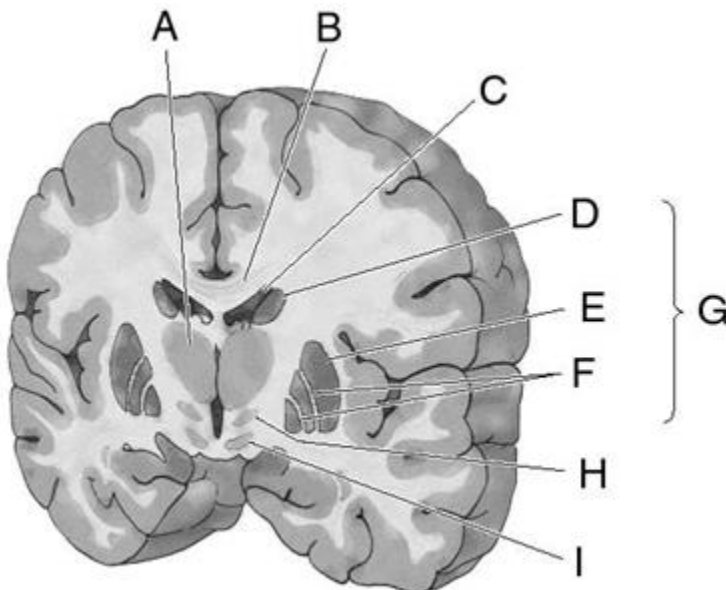
4. Label the brain structures on the figure.



1. _____
2. _____
3. _____
4. _____

ANSWER: 1. neocortex; 2. basal ganglia; 3. hippocampus; 4. amygdala

5. Match each letter to the correct brain structure.



ANSWER: 1. D; 2. C; 3. G; 4. I; 5. H; 6. A; 7. E; 8. F; 9. B