

Unit 3- The Brain
MODULE 9 Practice Questions

Name: _____ Date: _____ Block: _____

1. Who believed that bumps on the skull reveal mental abilities and character traits?
 - A) Sir Charles Sherrington
 - B) Stephen Kasslyn
 - C) Franz Gall
 - D) Candace Pert
 - E) Solomon Snyder

2. Dendrites are branching extensions of
 - A) neurotransmitters.
 - B) endorphins.
 - C) neurons.
 - D) myelin.
 - E) endocrine glands.

3. An axon is
 - A) a cell that serves as the basic building block of the nervous system.
 - B) a layer of fatty tissue that encases the fibers of many neurons.
 - C) an antagonist molecule that blocks neurotransmitter receptor sites.
 - D) the extension of a neuron that carries messages away from the cell body.
 - E) a junction between a sending and receiving neuron.

4. In transmitting sensory information to the brain, an electrical signal travels from the _____ of a single neuron.
 - A) cell body to the axon to the dendrites
 - B) dendrites to the axon to the cell body
 - C) axon to the cell body to the dendrites
 - D) dendrites to the cell body to the axon
 - E) axon to the dendrites to the cell body

5. As you are reading this question, the cells in your eyes are firing in response to the light coming from this paper. Which type of neuron is carrying this message to the brain?
- A) interneuron
 - B) sensory
 - C) presynaptic
 - D) motor
 - E) efferent
6. The axon of a resting neuron has gates that do not allow positive sodium ions to pass through the cell membrane. What is this characteristic called?
- A) myelin sheath
 - B) threshold
 - C) selective permeability
 - D) action potential
 - E) parasympathetic nervous system
7. The depolarization of a neural membrane can create a(n)
- A) action potential.
 - B) myelin sheath.
 - C) lesion.
 - D) neural network.
 - E) interneuron.
8. Resting potential is to action potential as _____ is to _____.
- A) adrenal gland; pituitary gland
 - B) sensory neuron; motor neuron
 - C) temporal lobe; occipital lobe
 - D) polarization; depolarization
 - E) dendrite; axon
9. The minimum level of stimulation required to trigger a neural impulse is called the
- A) reflex.
 - B) threshold.
 - C) synapse.
 - D) action potential.
 - E) refractory period.

10. A synapse is a(n)
- A) chemical messenger that triggers muscle contractions.
 - B) automatic response to sensory input.
 - C) neural network.
 - D) junction between a sending neuron and a receiving neuron.
 - E) neural cable containing many axons.
11. 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.
 - E) the ending of the refractory period.
12. The chemical messengers released into the spatial junctions between neurons are called
- A) hormones.
 - B) neurotransmitters.
 - C) synapses.
 - D) sensory neurons.
 - E) motor neurons.
13. Prozac, a drug commonly prescribed to treat depression, prevents the sending neuron from taking in excess serotonin. Which process does this drug prevent from taking place?
- A) depolarization
 - B) reuptake
 - C) the all-or-none response
 - D) an action potential
 - E) a refractory period
14. Alzheimer's disease is most closely linked to the deterioration of neurons that produce
- A) dopamine.
 - B) acetylcholine.
 - C) epinephrine.
 - D) endorphins.
 - E) glutamate.

15. An undersupply of serotonin is most closely linked to
- A) Alzheimer's disease.
 - B) schizophrenia.
 - C) Parkinson's disease.
 - D) depression.
 - E) euphoria.
16. 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.
 - E) acetylcholine.
17. The body's speedy, electrochemical information system is called the
- A) circulatory system.
 - B) threshold.
 - C) action potential.
 - D) nervous system.
 - E) endocrine system.
18. Motor neurons are an important part of the
- A) limbic system.
 - B) reticular formation.
 - C) peripheral nervous system.
 - D) brainstem.
 - E) motor cortex.
19. The longest part of a motor neuron is likely to be the
- A) dendrite.
 - B) axon.
 - C) cell body.
 - D) synapse.
 - E) neurotransmitter

20. The peripheral nervous system is to sensory neurons as the central nervous system is to
- A) motor neurons.
 - B) neurotransmitters.
 - C) interneurons.
 - D) the sympathetic nervous system.
 - E) the parasympathetic nervous system.
21. The somatic nervous system is a component of the _____ nervous system.
- A) peripheral
 - B) autonomic
 - C) central
 - D) sympathetic
 - E) parasympathetic
22. An accelerated heartbeat is to a slowed heartbeat as the _____ nervous system is to the _____ nervous system.
- A) somatic; autonomic
 - B) autonomic; somatic
 - C) central; peripheral
 - D) sympathetic; parasympathetic
 - E) parasympathetic; sympathetic
23. Motor neurons are to the _____ nervous system as interneurons are to the _____ nervous system.
- A) sympathetic; parasympathetic
 - B) central; peripheral
 - C) autonomic; somatic
 - D) parasympathetic; sympathetic
 - E) peripheral; central
24. While relaxing in a lawn chair enjoying a cool drink, which of the following triggers the “rest-and-digest” response, as your heart rate slows and digestion begins?
- A) sympathetic nervous system
 - B) limbic system
 - C) somatic nervous system
 - D) parasympathetic nervous system
 - E) motor cortex

25. Neural networks refer to
- A) the branching extensions of a neuron.
 - B) interconnected clusters of neurons in the central nervous system.
 - C) neural cables containing many axons.
 - D) junctions between sending and receiving neurons.
 - E) neurons that connect the central nervous system to the rest of the body.
26. The knee-jerk reflex is controlled by interneurons in the
- A) action potential.
 - B) spinal cord.
 - C) resting potential.
 - D) endocrine system.
 - E) neurotransmitters.
27. Hormones are the chemical messengers of the
- A) action potential.
 - B) autonomic nervous system.
 - C) endocrine system.
 - D) peripheral nervous system.
 - E) central nervous system.
28. Endocrine glands secrete hormones directly into
- A) synaptic gaps.
 - B) the bloodstream.
 - C) dendrites.
 - D) sensory neurons.
 - E) interneurons.
29. The ovaries in females and the testes in males are part of the
- A) peripheral system.
 - B) endocrine system.
 - C) sympathetic nervous system.
 - D) somatic system.
 - E) central nervous system.
30. Epinephrine and norepinephrine are released by the
- A) thyroid gland.
 - B) pituitary gland.
 - C) parathyroids.
 - D) adrenal glands.
 - E) pancreas.

31. The chemical messengers of the endocrine system are called
- A) neurotransmitters.
 - B) interneurons.
 - C) hormones.
 - D) agonists.
 - E) antagonists.
32. Which endocrine gland regulates body growth?
- A) parathyroid
 - B) adrenal
 - C) thyroid
 - D) pituitary
 - E) pancreas
33. The master gland of the endocrine system is the
- A) thyroid gland.
 - B) adrenal gland.
 - C) pituitary gland.
 - D) pancreas.
 - E) hypothalamus.
34. If a professor accused you of cheating on a test, your adrenal glands would probably release _____ into your bloodstream.
- A) endorphins
 - B) acetylcholine
 - C) serotonin
 - D) epinephrine
 - E) insulin
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.
 - E) transmit signals to other neurons.

Answer Key

1. C
2. C
3. D
4. D
5. B
6. C
7. A
8. D
9. B
10. D
11. D
12. B
13. B
14. B
15. D
16. D
17. D
18. C
19. B
20. C
21. A
22. D
23. E
24. D
25. B
26. B
27. C
28. B
29. B
30. D
31. C
32. D
33. C
34. D
35. A