

NAME _____

DATE _____

SPMD 201 – Human Anatomy for Sports Medicine
Nervous System Cells
Chapter 11

Multiple Choice

- _____ 1. Dendrites:
- A. respond to neurotransmitter by producing local potentials.
 - B. conduct action potentials away from the cell body.
 - C. are generally long and unbranched.
 - D. have a distal portion that branches to form terminal boutons.
- _____ 2. Nissl bodies are:
- A. part of a dendrite.
 - B. also called gemmules.
 - C. bundles of neurofilaments.
 - D. areas of rough endoplasmic reticulum.
- _____ 3. A neuron that carries action potentials from one neuron to another is called a(n) _____ neuron.
- A. motor
 - B. sensory
 - C. afferent
 - D. association
- _____ 4. A neuron that conducts pain sensations to the central nervous system would be classified as a(n) _____ neuron.
- A. motor
 - B. afferent
 - C. efferent
 - D. association
- _____ 5. Neurons that have a single axon and a single dendrite are:
- A. unipolar.
 - B. bipolar.
 - C. multipolar
 - D. anaxonic

- _____6. Which of the following statements regarding neuroglia is false?
- A. Neuroglia serve as the major supporting tissue in the CNS.
 - B. Neuroglia form part of the blood-brain barrier.
 - C. Neuroglia produce action potentials for skeletal muscles.
 - D. Neuroglia form myelin sheaths around some axons.
- _____7. The blood-brain barrier:
- A. permits passage of foreign substances from the blood to neurons.
 - B. prohibits the transport of amino acids and glucose to the neurons.
 - C. prohibits the removal of waste materials from neurons.
 - D. protects neurons from toxic substances in the blood.
- _____8. Microglia:
- A. are part of the blood-brain barrier.
 - B. are phagocytic cells in the CNS.
 - C. produce cerebral spinal fluid.
 - D. form myelin sheaths.
- _____9. Schwann cells differ from oligodendrocytes in which of the following ways?
- A. Schwann cells form myelin; oligodendrocytes do not.
 - B. Oligodendrocytes are only found in the CNS; Schwann cells are only found in the PNS.
 - C. Schwann cells form sheaths around several axons, while oligodendrocytes form sheaths around only one axon.
- _____10. Gaps or interruptions in the myelin sheath are called:
- A. internodes.
 - B. tight junctions.
 - C. neurofilaments.
 - D. nodes of Ranvier.

Alternate Choice

1. Neuroglia are neural / nonneural (circle one) cells.
2. Sensory neurons are also called afferent / efferent (circle one) neurons.
3. Astrocytes / Microglia (circle one) phagocytize foreign substances that enter the CNS.

4. Axons / Dendrites (circle one) transmit action potentials to other cells.
5. Schwann cells are found in the central / peripheral (circle one) nervous system.
6. Myelinated / Unmyelinated (circle one) axons conduct action potentials rapidly.
7. Most sensory neurons are bipolar / unipolar (circle one).
8. Oligodendrocytes form myelin sheath(s) around a single / many (circle one) axon(s).
9. The blood-brain barrier allows / prohibits (circle one) the passage of glucose into the brain.
10. Neuroglia / Neurons (circle one) account for more than half of the brain's weight.

Multiple Choice

- | | | | |
|----|---|-----|---|
| 1. | A | 6. | C |
| 2. | D | 7. | D |
| 3. | D | 8. | B |
| 4. | B | 9. | B |
| 5. | B | 10. | D |

Alternate Choice

- | | | | |
|----|------------|-----|------------|
| 1. | nonneural | 6. | Myelinated |
| 2. | afferent | 7. | unipolar |
| 3. | Microglia | 8. | many |
| 4. | Axons | 9. | allows |
| 5. | peripheral | 10. | Neuroglia |