

Anatomy and Physiology

Miss Ulmer

Unit 6 Syllabus -- The Nervous System

Book Chapters

- Chapter 7: The Nervous System p225-273

Learning Objectives

- Upon completion of this unit, students will be successfully be able to...

Concepts from Class Notes and Discussions

1. Differentiate among the various divisions of the nervous system and recognize their primary functions and characteristics: CNS/PNS, Sensory/Motor, Somatic/Autonomic, Parasympathetic/Sympathetic
2. Explain the significance of the glial cells found in the CNS and PNS
3. Label the defining features of a multipolar neuron
4. Describe how myelin is formed in the nervous system and its importance to the CNS and PNS
5. Characterize the general types of neurons and their functions
6. Explain the generation of an action potential and how an action potential is transmitted from one neuron to another at a synapse
7. Examine the components and characteristics of reflexes and reflex arcs, understanding why reflexes are important to humans
8. Distinguish among the four major anatomical regions of the brain
9. Discuss how the brain is protected and how CSF is generated, circulated, and absorbed
10. Understand the differences between dorsal root and ventral root of spinal nerves
11. Define a ramus and differences between dorsal and ventral rami along with explaining what a plexus is

Concepts from Labs and Dissection

12. Identify the lateral, medial, posterior, and anterior portions of a sheep's brain
13. Understand the differences between a coronal, sagittal, and horizontal planes
14. Identify the following structures on a sheep's brain: longitudinal fissure, cerebellum, brain stem, parietal lobe, occipital lobe, temporal lobe, frontal lobe, pons, medulla, cerebellum, olfactory bulb, optic chiasm, corpus callosum, ventricles, thalamus, hypothalamus, spinal cord, and dura mater

Reading Quizzes

RQ#8 p225-232

- Stop reading at the "Classification" heading
- Pay attention to the figure on p230 and be familiar with the axon, dendrites, cell body, and axon terminal on the figure

RQ#9 p232-239

- Stop reading at the "Central Nervous System" heading

RQ#10 p247-255

- Start reading at the "Protection of the Central Nervous System" heading; stop reading at the "Peripheral Nervous System" heading

RQ#11 p255-269

- You do not need to memorize all of the cranial nerves and their functions; also you do not have to memorize all of the spinal nerve plexuses and their functions; stop reading at the "Developmental Aspects of the Nervous System"