

Unit 7 – The Nervous System

Reading Assignment:

Chapter 11 – Fundamentals of the Nervous System and Nervous Tissue
(pages 388-426)

Vocabulary:

Please define the following terms and use them to study for the Unit Quiz. Be prepared to turn in a list of your definitions the day of the quiz. You may use flashcards, list form, Quizlet, or whatever is most practical and useful for you.

Central nervous system	Processes
Peripheral nervous system	Dendrites
Sensory (afferent) division	Axon
Motor (efferent) division	Myelin sheath
Somatic nervous system (voluntary)	Voltage
Autonomic nervous system (involuntary)	Resistance
Sympathetic division	Current
Parasympathetic division	Ligand-gated ion channel
Neuroglia (glial cells)	Voltage-gated ion channel
Neuron	Mechanically-gated ion channel
Soma	Electrochemical gradient

Study Questions:

*Answer the following questions throughout the unit. Be ready to turn in your work the day of the quiz. Use in class notes, the textbook, and other resources to guide you in writing your **own** original response to the question. Think critically!*

1. List the basic functions of the nervous system.
2. Explain how the nervous system is organized. Give the structural and functional divisions of the nervous system.
Define neuron. Describe a neuron's structural components, and give their function.
3. Explain the importance of the myelin sheath.
4. Define resting membrane potential and describe its electrochemical basis.
5. Name and compare the four types of ion channels found in plasma membranes.
6. Explain how action potentials are generated and propagated along neurons.
7. Name two factors that effect conduction velocity on a nerve fiber.
8. Define synapse. Distinguish between electrical and chemical synapses.
9. Describe the five steps that occur in response to a depolarization event at a chemical synapse. (hint: p. 410)
10. Define neurotransmitter. Give an example of a neurotransmitter, and describe its function