

## Chapter 12 - Nervous Tissue

1. Describe the three broad functions of the nervous system.
2. Explain the parts and organization of the nervous system.
3. Define:
  - a. CNS
  - b. PNS
  - c. afferent
  - d. efferent
  - e. somatic
  - f. autonomic/visceral
4. Describe the structure of nervous tissue and its components
5. Describe the structure and function of each part of a neuron. Draw and label a neuron.
6. Define synapse and describe the structure of a synapse. Explain how a chemical synapse works. Define neurotransmitter. Draw and label a chemical synapse.
7. Describe the structural classification of neurons. Draw and label the main cell parts of the three major structural types of neurons.
8. Describe the functional classification of neurons.
9. Name and describe the supporting/glia cells and their functions for the
  - a. CNS
  - b. PNS
10. In the CNS, glial cells outnumber neurons \_\_\_\_ to \_\_\_\_\_. Glial cells make up about \_\_\_\_% of the brain mass.
11. Explain where a myelin sheath may be found, how it is formed (CNS and PNS), and what it does.
12. Describe the nodes of Ranvier and compare their spacing in the PNS and CNS.

13. Describe the neurilemma.
14. Describe the location and structure of gray and white matter in the CNS. Define the terms: tract, nerve, nucleus and ganglion. Draw and label a diagram showing their structure, location and connections in the CNS and PNS.
15. Describe the basic structure of a nerve.
16. Explain the difference between a nerve, a nerve fiber, and a neuron.
17. Define reflex and describe the characteristics of a reflex.
18. Draw and label a reflex arc. Describe the components and structure of a reflex arc.
19. If neurons are damaged, can they be replaced by mitosis? If a nerve process is damaged, can it regenerate? Under what circumstances? Explain the process of regeneration.