

## CNS—Central Nervous System

### Required:

1. Assign anatomical names to the three brain regions and list the component structures of each region: hind, mid, and fore.
2. Once above list is completed state the function of each specified area.
3. Define and describe the two major brain systems: the RAS, and the limbic system.
4. Distinguish among the terms nerve, tract, nucleus and ganglion.
5. List the functional areas of the cerebral cortex with their specific roles (explain the term Brodman's areas).
6. Sketch the gross full length view of the spinal cord and label the following areas/structures: cervical enlargement, lumbar enlargement, conus medullaris, cauda equina, filium terminale. Describe the significance of each structure.
7. Sketch a cross section of the spinal cord, labeling and describing the following terms/structures:

-posterior/dorsal root and ganglion	-anterior median fissure
-posterior/dorsal sulcus	-central canal
-anterior/ventral root	-white columns:ant,post, lat.
- gray horns: ant., post., and lat.	-gray commissure
-meninges: dura & pia mater and arachnoid	
8. Explain the function of the spinal cord by describing the following terms: ascending sensory tracts, descending motor tracts, and spinal reflexes.
9. Describe the functions of the major ascending and descending tracts within the spinal cord.
10. Describe the five components of a reflex arc and differentiate between visceral and somatic spinal and cranial reflexes. Give examples of each type.
11. Characterize the three meningeal coverings of the CNS and the significance of the spaces between the meningeal layers.
12. Describe the locations of the four ventricles, the central canal, interventricular foramen of Munro, and the cerebral aqueduct.

13. Describe the formation and flow of cerebrospinal fluid using the terms from objective # 12 and the following terms: choroid plexus, subdural sinus, arachnoid villus.
14. Describe the blood-brain barrier and discuss its significance in pharmacology and medicine.
15. Compare and contrast the terms gray matter and white matter and distinguish their locations in the spinal cord, brain stem, and higher brain.