

PNS – Peripheral Nervous System

Required:

1. Define and explain the inter-relatedness of the following terms; sense, sensation, sensory mechanism and perception, and projection.
2. Explain the following properties of sensory receptors:
 - a. Construction: Dendritic endings and associated tissues
 - b. Excitability: generator/receptor potentials
 - c. Frequency/strength relationship
 - d. Specificity, Modality
 - e. Tonic vs. Phasic
 - f. Adaptability
3. Describe how receptors transform different stimuli and code the information so that it can be sent to the CNS.
4. Describe the relationship between receptor potentials and action potentials in afferent neurons
5. Describe how the CNS decodes action potentials and thereby interprets them as specific sensory information (i.e. .how does the CNS interpret action potentials from the eye as light and action potentials from the taste buds as taste?).
4. Classify receptors by location giving examples of each.
5. Classify receptors by modality giving examples of each type.
6. List the three types of somatic/body senses.
7. Describe the location and function of each of the following types of receptors in somatic /body sense:
 - a. Free nerve endings
 - b. Root hair plexus
 - c. Merkel's plexus
 - d. End organs of Ruffini
 - e. Meissner's corpuscles
 - f. Pacinian corpuscles
 - g. Muscle spindles
 - h. Golgi tendon organs
 - i. Baroreceptors
 - j. Carotid/aortic bodies

8. Describe and give examples of the phenomenon, “referred pain”.
9. Describe the CT coverings found in the arrangement of nerve fibers within a nerve.
10. List by name & Roman Numeral the (12) Cranial nerves. Describe their functions.
11. Describe the spinal nerves by number in each division, fiber type, and organization of fibers into the ventral and dorsal roots, rami, and dorsal root ganglion.
12. Define the term dermatome and relate it to the arrangement of spinal nerves.
13. Define the term plexus and describe its functional significance in the nervous system.
14. Name the major plexi and list an example of a major nerve exiting from each plexus.
15. Describe the essential factors necessary for nerve repair or replacement and describe the process of regeneration.