

Answers to Nervous System Quiz Review

35-2 p. 900

#1. The human nervous system controls and coordinates functions throughout the body and responds to internal and external stimuli.

#2. If the stimulus is large enough (reaches the threshold), an impulse begins that travels rapidly along the axon toward the axon terminals, where the impulse is passed on to another cell.

#3. The three types of neurons are sensory neurons, motor neurons, and interneurons.

#4. The myelin sheath insulates the axon and greatly increases the speed of transmission of nerve impulses.

#5. There are two possible factors: the number of sensory neurons activated by a stimulus and the frequency of the stimulation.

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#1. The overall function of the CNS is to process and analyze information, and to relay messages.

#2. The sensory division transmits impulses from sense organs to the CNS. The motor division transmits impulses from the CNS to muscles and glands (effectors).

#3. The CNS is protected from injury by the skull and vertebrae, the meninges, and the cerebrospinal fluid.

#4. The hypothalamus recognizes and analyzes hunger, thirst, fatigue, anger, and body temperature. It also controls the coordination of the nervous and endocrine systems.

#5. A reflex is part of both the CNS and PNS because it involves sensory and motor neurons of the PNS, and is processed in the spinal cord, which is part of the CNS.