

Nervous Tissue

Wednesday, 24 November 2021 12:58 AM

Nervous System

- provides its rapid and precise communication between different parts of the body via the actions of specialized nervous cells called Neurons

Neurons

- interconnected and functional to gather and process information and generate appropriate response signal
- main function is conductivity

Main Components

- neurons
- nerve cells
- neuroglia [supporting cells]
 - includes astrocytes, microglia, Schwann cells, ependymal cells

Neurons

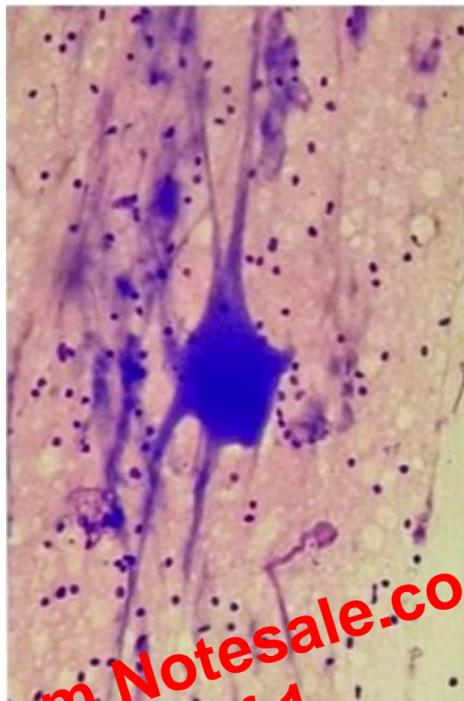
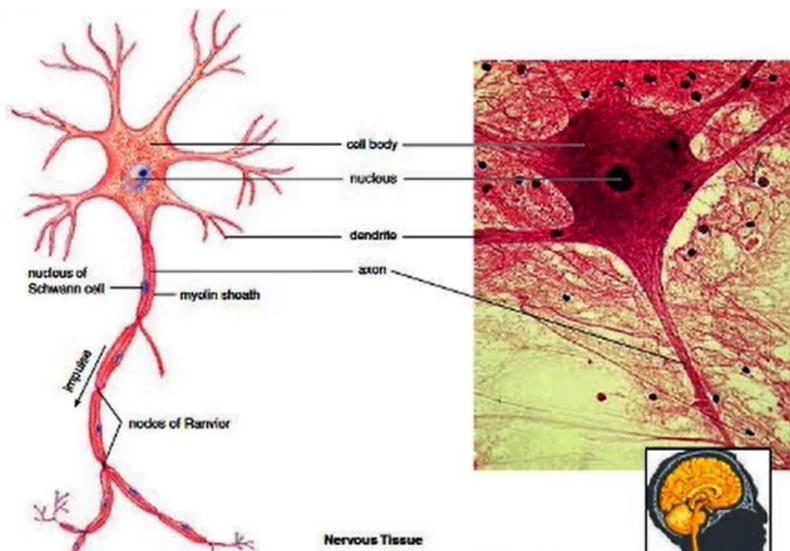
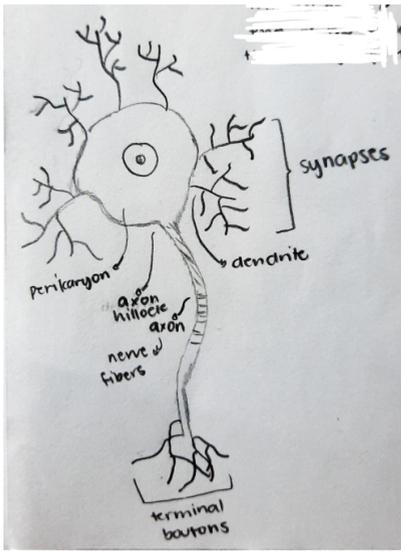
- nerve cells that are responsible for transmitting signals

Glia Cells

- nonconducting cells that are responsible for supporting the growth and development of the neurons

Excitability

- disruption of the plasma membrane
 - changes in the concentration is a direct response to the external stimuli
- involves transiently changing the membrane permeability in response to appropriate stimuli so that the ionic gradient is partially reversed and plasma membrane loses its electrical potential - depolarized



Type of tissue: Nervous Tissue
Source: Cow's Nerve Smear

Preview from Notesale.co.uk
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The Neurons

Cell Body

- large spherical/ovoid nucleus with conspicuous nucleolus
 - Nissl Bodies
 - clumps of bluish material scattered in the cell body and dendrites

Dendrite

- short and numerous branching processes radiating from the cell body

Axon

- single, thin, long process from the cell body
- may be wrapped or ensheathed by myelin [Nodes of Ranvier] located at regular intervals
- terminate at branching and twig-like endings [Telodendria] with small swellings at each terminal twig
 - terminal buttons - swelling