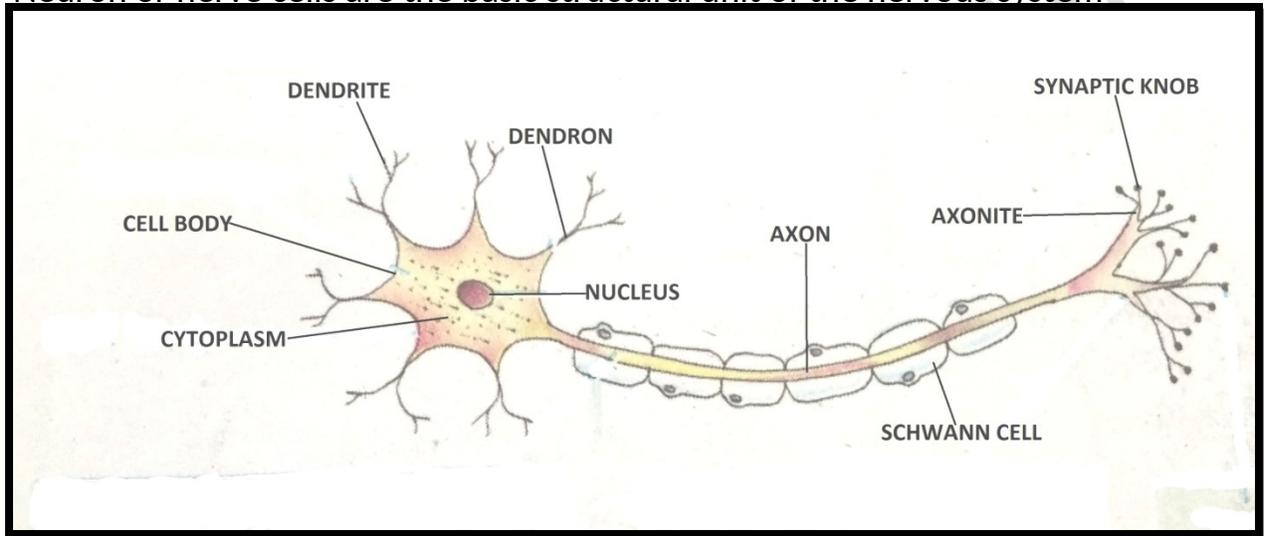


FOCUS POINT

SENSATIONS AND RESPONSES

Nervous system control and coordinate all rapid actions in our body, it includes brain, spinal cord and nerves.

Neuron or nerve cells are the basic structural unit of the nervous system



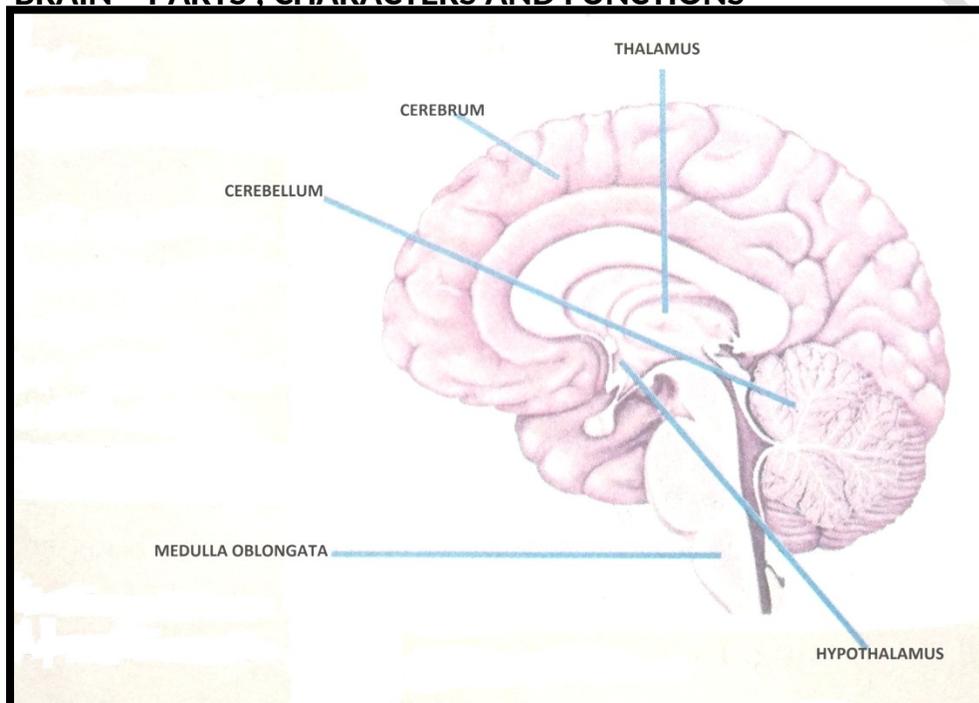
NEURON -PARTS CHARACTERS AND FUNCTIONS.

| PART | CHARACTERS | FUNCTION |
|---------------|--------------------------------------|--|
| Dendrite | Branches of Dendron | Part that receives impulses from adjacent neuron |
| Dendron | Short filament from the cell body | Carries impulses from dendrites to cell body |
| Cell body | Main part with nucleus and cytoplasm | Carries impulses from Dendron to axon |
| Axon | Longest filament from the cell body | Carries impulses from cell body to outside |
| Axonite | Branches of axon | Carries impulses to the synaptic knob |
| Synaptic knob | Tip of Axonite | Secretes neurotransmitters |
| Schwann cell | Encircles the axon | Forms the myelin sheath in nerves |

NERVES- Group of axon or nerve fibres covered by connective tissue.

| NERVES | PECULIARITIES | FUNCTIONS |
|---------------|---|--|
| Sensory nerve | Formed of sensory nerve fibres | Carries impulses from various parts of the body to the brain and spinal cord |
| Motor nerve | Formed of motor nerve fibres | Carries impulses from brain and spinal cord to various parts of the body |
| Mixed nerve | Formed of sensory nerve fibres and motor nerve fibres | Carries impulses to and from the brain and spinal cord |

BRAIN - PARTS , CHARACTERS AND FUNCTIONS



| PARTS | CHARACTERS | FUNCTIONS |
|-------------------|--|---|
| Cerebrum | Largest part of brain Fissures and folds are present The grey coloured outer part is cortex and white coloured inner part is medulla | Centre of thought, intelligence, memory and imagination. Evokes sensations Controls voluntary movements |
| Cerebellum | Second largest part of the brain Seen behind the cerebrum as two flaps Fissures and grooves are present | Co ordinates muscular activities and maintain equilibrium of the body |
| Medulla oblongata | Rod shaped, seen below the cerebrum, located near the cerebellum | Control involuntary actions like heart beat, breathing etc |

| | | |
|--------------|-----------------------------|---|
| Thalamus | Situated below cerebrum | Act as relay station to and from the cerebrum Analyse impulses from various parts of the body and sends the important ones to the cerebrum |
| Hypothalamus | Situated below the thalamus | Plays a major role in the maintenance of homeostasis |

NERVOUS SYSTEM AND ITS DISORDER

| DISEASE | CAUSES | SYMPTOMS |
|----------------|--|---|
| Alzheimer's | Accumulation of an insoluble protein in the neural tissue of the brain. Neurons get destroyed | Loss of memory, inability to recognize friends and relatives, inability to do routine works |
| Parkinson's | Destruction of specialized cells ganglions in the brain. Production of dopamine, a neurotransmitter in the brain gets reduced | Loss of body balance, irregular movement of muscles, shivering of the body, profuse salivation |
| Epilepsy | Continuous and irregular flow of electric charges in the brain. | Epilepsy due to the continuous muscular contraction, frothy discharges form the mouth, clenching of the teeth following which the patient falls unconscious |

Prepared by

ANEESH.M

HSA BIOLOGY

KARIMBIL HIGH SCHOOL KUMBALAPPALLY