

# Human Nervous System

## 1. What is a Nerve?

- ◆ Several axons are enclosed in a connective tissue sheath. This called a Nerve.

## 2. What are the main components in Nervous System?

- ◆ Brain, spinalcord and nerves are the components of nervous system.

## 3. What are Nissle's Granules? Where do you find them?

- ◆ Neuron or nerve cell consist of three parts. They are

1. Cyton 2. Axon 3. Dendrites

Cyton has large round nucleus, around the nucleus fluid is present called cytoplasm. In the cytoplasm of neuron there are large number of granules which are made up of RNA and proteins. These substances are called nissle's granules.

## 4. What is a Nerve Impulse?

- ◆ When stimulus is applied to neuron, a small electrical potential about 0.055 volts or 55 millivolts is generated. This electrical potential is called action potential or commonly known as nerve impulse.
- ◆ This potential travels all along the length of the axon until it reaches the nerve terminal.

## 5. Describe the structure of Neuron?

- ◆ Neuron/nerve cell consist of three parts. They are 1.Cyton/cell body 2. Axon 3. Dendrites.

### Cell body:

This is also known as cyton. It is the largest part of neurons. It has a large round nucleus around the nucleus fluid is present called cytoplasm. Cytoplasm of neuron consist of large number of nissle granules which are made up proteins and RNA.

- ◆ Cyton is the centre for all synthetic activity of the neuron.

**Axon:** It is the projection of cell body. Each neuron has only one axon.

- ◆ Axon is a long and cylindrical in shape and no branches.
- ◆ Axon is also known as nerve fibre.
- ◆ Axon is covered by plasma membrane called Myelin sheath.
- ◆ Myelin sheath leaves small gaps called node of

ranvier.

- ◆ Myelin sheath prevents the leakage of electrical currents from the axon.

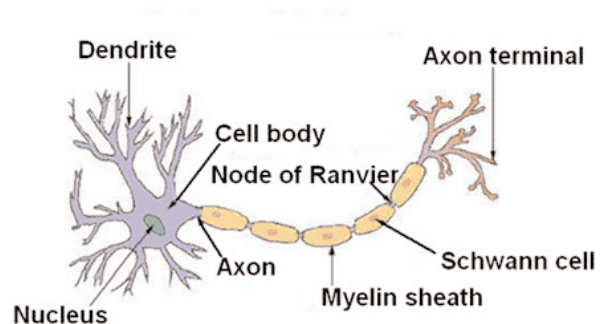
### Dendrites:

These are projection of cell body. These helps in connection of neuron to other neuron. These are thread like structures and having many branches.

- ◆ Dendrites are used in transformation of impulses from one neuron to other neuron.

- ◆ Draw the neat diagram of neuron and label the parts.

## Structure of a Typical Neuron



### Assignment:

1. Cell body is also known as \_\_\_\_\_
2. Nerve fibre is otherwise called \_\_\_\_\_
3. Sensory nerves are also called \_\_\_\_\_
4. Nervous system is made up of \_\_\_\_\_, \_\_\_\_\_ components.

### KEY

1. Cyton
2. Axon
3. Afferent Nerves
4. Brain Spinal cord