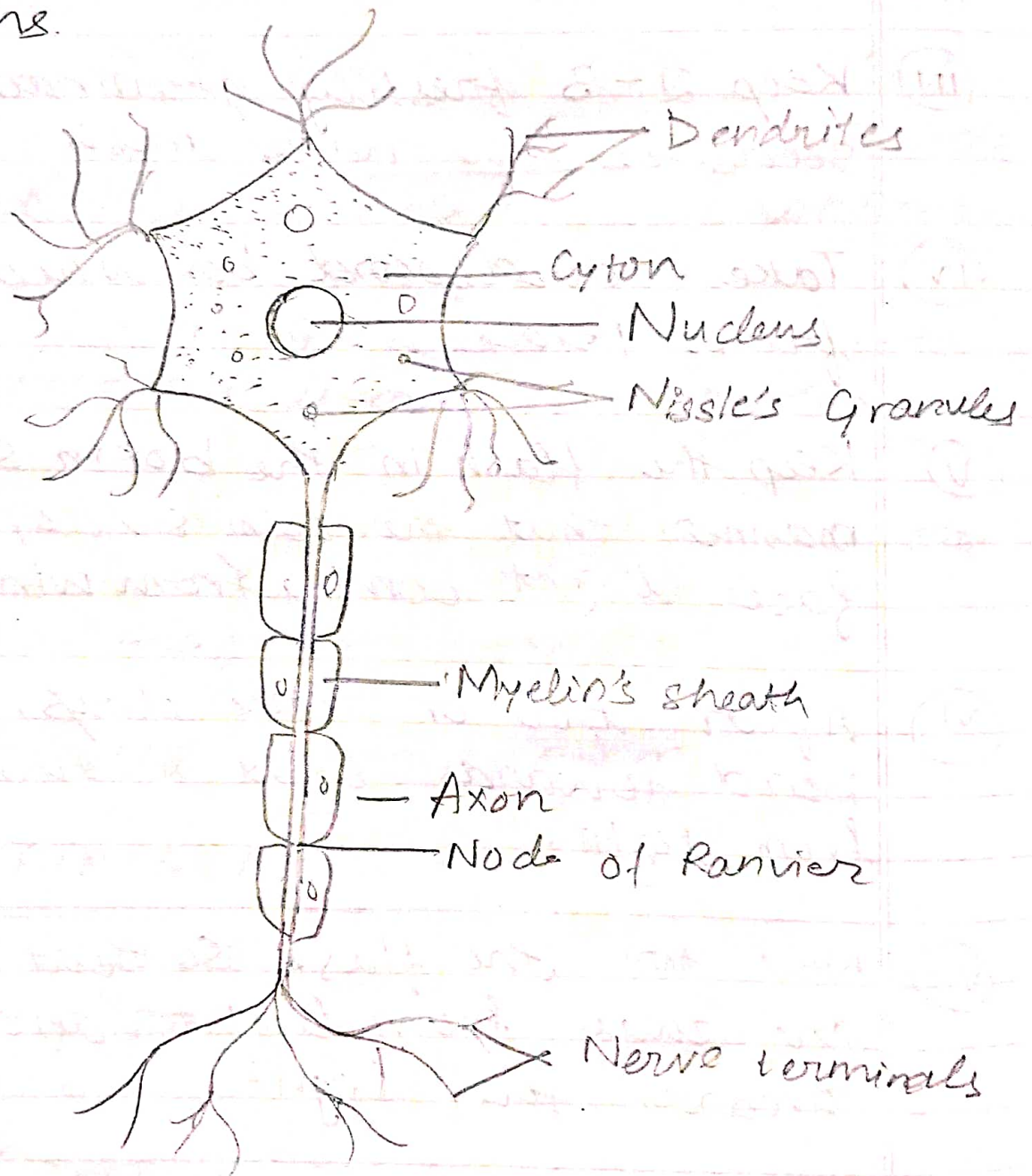


1. Draw a well-labelled diagram of neurons.



2. Trace the pathway of impulse conduction in your body.

Ans * The receptor in a sense organ is in touch with the dendrites of sensory neuron.

* When stimulus acts on the receptor, a chemical reaction is set off which produces an electrical impulse in it.

* This impulse travels from the dendrite of sensory neuron to its cell body & then along its axon. At the end of the axon of the sensory neuron, the electrical impulse releases a tiny amount of a chem substance into the synapse.

* The chemical substances passes the gap (synapse) and starts a similar electrical impulse in the dendrite of the next neuron.

* From the dendrite, this electrical impulse is carried to the cell body and then to the end of axon of the 2nd neuron. It can then be transformed to 3rd neuron in a similar way.

* This process goes on till the electrical impulse reaches the relay neurons in spinal cord & brain.

* The relay neurons & motor neurons connect in a similar way to bring electrical impulses from brain and spinal cord to the effectors like muscles & glands.

* Thus impulse conduction takes place in this way.

Q. What do you mean by reflex action? What is its significance?

Ans. The simplest form of response in the nervous system is called as reflex action.

→ Reflex action help in protecting us against any sudden stimulus which may harm us and helps in ensuring survival of organism.

→ The deep tendon reflexes provide information on the integrity of CNS & PNS. Here, decreased reflexes indicate a peripheral problem while lively or exaggerated reflexes a central one.

Thus reflexes also help us in knowing damages or issues in our body.

Q) Classify the neurons on the basis of number.

Ans ① Multipolar -

The neurons which have 3 or more processes that extend out from the cell body.

② Bipolar -

They have 2 processes that extend in opposite directions from cell body.

③ Unipolar -

They have a single, short process that extends from the cell body & then branches into 2 or more processes that extend in opp directions.