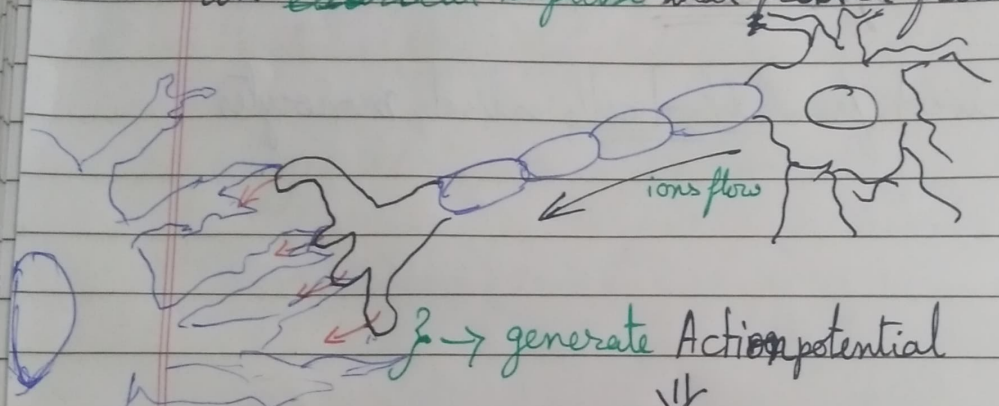
Neurons (Nerve cells):-

- They are specialized cells for sending & recieving signals
- They can carry sensory information from parts of body to the brain
- They are the main signalling units of nervous system.

Most neurons use electrical & chemical signals to send messages throughout the brain.

→ Action potential generated

When particles called ions flow into neurons and generate an electrical impulse that travel from one neuron to another

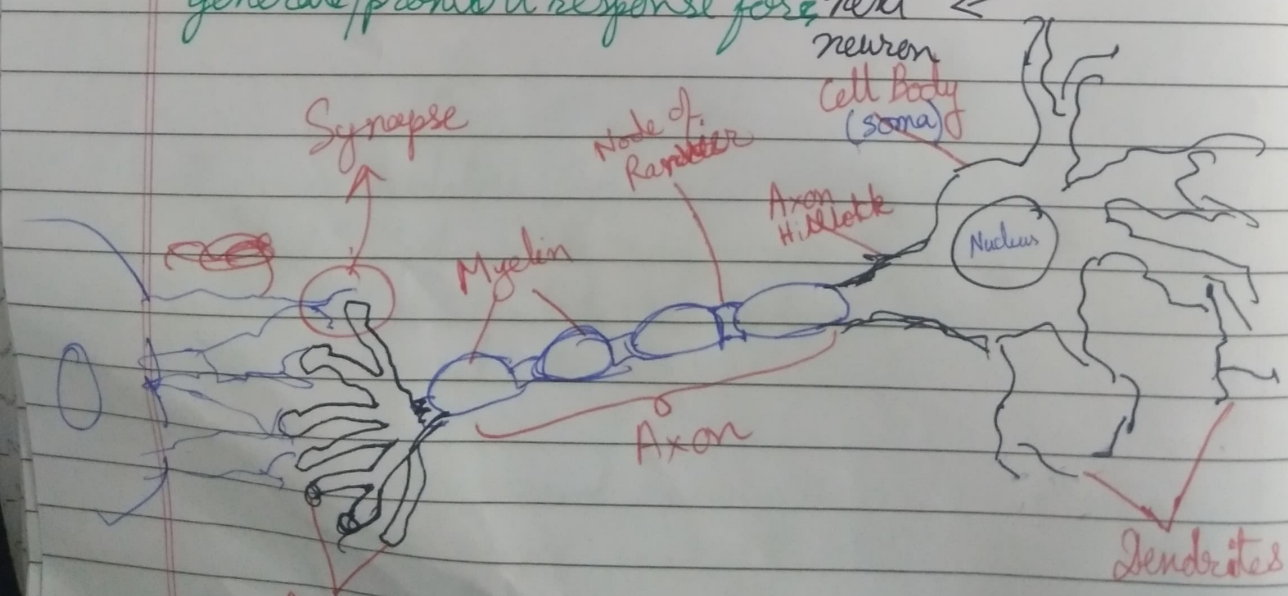


→ generate Action potential

⇓

Another Neuron — Chemical signals called Neurotransmitters

generate/prohibit response for next neuron



Parts of Neurons :-

1) Dendrites :- It is the part of the neuron that recieves messages from other neurons.

On the surface of dendrites, we have proteins called receptors that the neurotransmitters can interact with
Hence, it is the INPUT area for the neuron

2) Cell Body (soma) :- It is the part of the ~~body~~ neuron that most resembles a typical cell (soma → means body)

It is the metabolic center of the nerve cell/neuron.
- It contains nucleus with DNA
- It contains organelles for making proteins
- It is the site of synthesis of other neural components

3) Axon :- It is the part of the neuron that conduct action potentials ~~which~~. They vary in size [PNS has the longest axons in the body]

Axons are usually covered in lipid-rich insulatory material called Myelin sheath

Schwann cells (in PNS) ← derived from → Oligodendrocytes (in CNS)

Myelin sheath :- • Prevents current leaking from axons
• Helps in rapid conduction of nerve impulses

4) Presynaptic Terminal :- The neuron whose axon terminals end at the synaptic cleft is called Presynaptic neuron whereas the neuron at the other side of synaptic cleft is called Post synaptic neuron

But, Presynaptic Terminals are the branch endings of neurons called axon terminals/synaptic ~~button~~ bouton