

# Neural Control and Coordination

## Case Study Based Questions

### 1. Read the following passage and answer the questions that follow:

Dendrites are the short fibre which is extended out of the cell body. Cell body contains Nissl's granules. It also contains cytoplasm and a large nucleus. The axon conducts nerve impulses away from the cell body to a synapse or a neuromuscular junction. Axons are of two types, myelinated and non myelinated.



(A) Why axon hillock is the most sensitive part of the neuron?

(B) Why are centrioles absent in mature neurons?

(C) Identify A, B, C, D, E and F

**Ans.** (A) Due to the presence of sodium channels, axon hillock is known as the most sensitive part of the neuron.

(B) Centrioles are absent in mature neurons which prevents them from dividing mitotically. Because they are difficult to replace.

(C) A represents dendrites; B represents cell body; C represents axon hillock; D represents axon; E represents node of Ranvier and F represents synaptic knob.