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CONTROL AND COORDINATION

I ASSERTION AND REASON QUESTIONS :-

1) Assertion: Impulse travels from dendrite to cell body and then along the axon to its end.

REASON: Information acquired at the end of the dendrite tip of a nerve cell sets off an electric impulse.

Ans: [C] A is true, but R is false

2) Assertion: Plants do have a nervous system for control and coordination.

REASON: Plants use electrochemical means to convey information from cell to cell.

Ans: [D] A is false, but R is true.

II Very Short Answer Type Questions :-

3) Name the two types of neurons? How is the functioning of one different from the other?

Ans: Two types of neurons are:

(a) Sensory neuron - They pass information from the receptors to the brain.

(b) Motor neuron - They transmit information from the brain to the effector organs.

4) List the sequence of events that occur when a plant is exposed to unidirectional light, leading to bending of a growing shoot. Also name the hormone and the type of movement.

Ans: • Auxin diffuses towards shady side.

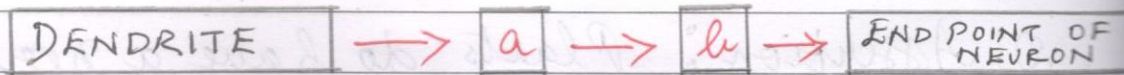
- Causes elongation on one side (shady side) result in bending of growing shoot.
- The hormone responsible for bending is auxin and the movement is phototropic movement.

III

5)

Short Answer Type Questions :-

- Name one gustatory receptor and one olfactory receptor present in human beings.
- Write **a** and **b** in the given flow chart of neuron through which information travels as an electrical impulse.



- what do you understand by the term 'target organ'? Give one example.

Ans

- Gustatory receptor - Tongue
 - olfactory receptor - Nose
- a - cell body / cyton
 - b - axon
- Specific tissue or organ on which hormones act are called target organs (eg) digestive system.

IV

6)

Case-Based Questions :-

When we eat food, our eyes, hands and mouth works in perfect Coordination. The eyes focus on the food, the hands pick it up and take it to the mouth where it is chewed. All these actions are completed in a particular sequence. Similarly, internal functions of

our body are carried out by the nervous system in a particular sequence.

(a) what is a reflex arc?

Reflex arc is the pathway taken by the nerve impulses and responses in a reflex action.

(b) How is the spinal cord protected?

The human spinal cord is primarily protected by the Vertebral column.

(c) How does an impulse travel in a nerve cell?

The impulse travels from the dendrite to the cyton along the axon to its end.

(d) Do plants have nerve cells? How does Coordination takes place in plant cells?

No, plants do not have nerve cells. In plants Coordination is brought about by means of chemical substances called phytohormones.