

SELF ASSESSMENT TEST SOLUTIONS

1. (a) Anil did not draw the following parts : (i) Dendrite (ii) Axon not connected.

(b) **Figure**

2. Reflex action is a sudden action in response to something in the environment.

E.g: pulling out hand from the flame if accidentally touched.

The path of the reflex action is as follows :

Receptors → sensory neuron → spinal cord → motor neuron → Effector

3. **Figure**

Dendrite – Receives the stimulus and conducts nerve impulse towards cyton.

Axon – Conducts the nerve impulse away from cyton.

4. (i) To receive external stimuli.

(ii) Organisms fail to receive stimuli and so fail to respond.

5. (a) Neuron.

Components - Cell body, Dendrite, Axon.

(b) Dendrites carry the nerve impulse towards the cell body.

Axons carry the nerve impulse away from the cell body.

6. (a) Voluntary actions – cerebellum; Involuntary action – medulla oblongata.

(b) The communication between the central nervous system and the other parts of the body is facilitated by the peripheral nervous system.

Cranial nerves arise from the brain; spinal nerves arise from the spinal cord.

7. (a) **Hormone** : Insulin

Organ produces this hormone : Pancreas

Effects on blood sugar level : If sugar levels in blood rise, they are detected by the cells of pancreas which respond by producing more insulin. As the blood sugar level falls, insulin secretion is also reduced.

Digestive enzymes secreted by pancreas:

(i) Trypsin - digest proteins.

(ii) Lipase - Breakdown the emulsified fats.

(b) Adrenalin.

Two responses :

- It acts on heart due to which heart beats faster, resulting in supply of more oxygen to our muscles.

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- The breathing rate increases because of the contractions of the diaphragm and the rib muscles.
- The blood to the digestive system and skin is reduced due to contraction of muscles around small arteries in these organs.