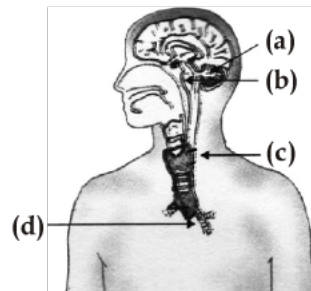


Q1. Name the plant hormones responsible for the following:

- (a) Elongation of cells (b) Growth of stem
(c) Promotion of cell division (d) Falling of senescent leaves.

Q2. Label the endocrine glands in figure.



Q3. What is a tropic movement? Explain with an example.

Q4. What will happen if intake of iodine in our diet is low?

Q5. Answer the following:

- (a) Which hormone is responsible for the changes noticed in females at puberty?
(b) Dwarfism results due to deficiency of which hormone?
(c) Blood sugar level rises due to deficiency of which hormone?
(d) Iodine is necessary for the synthesis of which hormone?

Q6. Why is the flow of signals in a synapse from axonal end of one neuron to dendritic end of another neuron but not the reverse?

Q7. How does chemical coordination take place in animals?

Q8. Nervous and hormonal systems together perform the function of control and coordination in human beings. Justify the statement.

Q9. What are reflex actions? Give two examples. Explain a reflex arc.

Q10. Name various plant hormones. Also, give their physiological effects on plant growth and development.

Q11. Mention one function for each of these hormones:

- (a) Thyroxin (b) Insulin (c) Adrenaline (d) Growth hormone (e) Testosterone

Q12. What constitutes the central and peripheral nervous systems? How are the components of central nervous system protected?

Q13. Draw the structure of a neuron and explain its function.

Q14. Answer the following:

- (a) Name the endocrine gland associated with brain?
(b) Which gland secretes digestive enzymes as well as hormones?
(c) Name the endocrine gland associated with kidneys?
(d) Which endocrine gland is present in males but not in females?

Q15. What are the major parts of the brain? Mention the functions of different parts.

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- S1.** (a) Auxin (b) Gibberellin (c) Cytokinins (d) Abscisic acid
- S2.** (a) Pineal gland (b) Pituitary gland (c) Thyroid (d) Thymus
- S3.** The directional growth movements of plants due to external stimuli are called tropic movement. It can be either towards the stimulus, or away from it. For example, in case of phototropic movement, shoots respond by bending towards light while roots respond by bending away from it.
- S4.** (a) When iodine intake is low, release of thyroxin from thyroid gland will be less by which protein, carbohydrate and fat metabolisms will be affected.
(b) A person might suffer from goitre in case of iodine deficiency in the body.
- S5.** (a) Oestrogen (b) Growth hormone (c) Insulin (d) Thyroxin
- S6.** When an electrical signal reaches the axonal end of a neuron, it releases a chemical substance. This chemical diffuses towards the dendrite end of next neuron where it generates an electrical impulse or signal. Hence, the electrical signal is converted into a chemical signal at the axonal end. Since these chemicals are absent at the dendrite end of the neuron the electrical signal, cannot be converted into chemical signal.
- S7.** Different endocrine glands secrete different hormones. These hormones are released into blood which carry them to specific tissues or organs called target tissues or target organs. In the target tissues, hormone triggers a particular biochemical or physiological activity.
- S8. Hints:** Nerve impulses
Dendritic end and axonal end
Role of hormones
Roles of blood, muscles and glands.
- S9. Hints:** Definition
Nerve impulses
- S10. Hints:** Auxin
Gibberellin
Cytokinin
Abscisic acid
- S11.** (a) **Thyroxin:** Regulates carbohydrate, fat and protein metabolisms.
(b) **Insulin:** Regulates blood sugar.
(c) **Adrenaline:** Increases heart rate and supply of blood to various organs.
(d) **Growth hormone:** Regulates growth and development.
(e) **Testosterone:** Controls the changes of body features associated with puberty in male.
- S12. Hints:** Brain and spinal cord
Brain box and vertebral column.
- S13. Hints:** Cell body
Dendrite
Axon

S14. (a) Pituitary (b) Pancreas (c) Adrenal (d) Testes

S15. Hints: Fore brain
Mid brain
Hind brain
Give its functions

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