

Time : 1 Hour 30 Minute

STD 10 Science
Chapter Based Test

Total Marks : 50

SECTION A

* Select and write one most appropriate option out of the four options given [7]
for each of the questions

- The hormone which increases the fertility in males is called:
(A) Oestrogen. (B) Testosterone. (C) Insulin. (D) Growth hormone.
- The amount of blood supplied to brain per minute is:
(A) 450ml (B) 50ml (C) 750ml (D) 1,000ml
- Select the mis-matched pair:
(A) Adrenaline : Pituitary gland. (B) Testosterone : Testes. (C) Estrogen : Ovary. (D) Thyroxin : Thyroid gland.
- Which of the following statements are true about the brain?
 - The main thinking part of brain is hind brain.
 - Centres of hearing, smell, memory, sight etc are located in fore brain.
 - Involuntary actions like salivation, vomiting, blood pressure are controlled by the medulla in the hind brain.
 - Cerebellum does not control posture and balance of the body.(A) (i) and (ii) (B) (i), (ii) and (iii) (C) (ii) and (iii) (D) (iii) and (iv)
- Which of the following is a plant hormone?
(A) Insulin. (B) Thyroxin. (C) Oestrogen. (D) Cytokinin.
- Which of the following endocrine glands is unpaired?
 - Adrenal.
 - Testes.
 - Pituitary.
 - Ovary.
- Dandelion flowers open the petals in bright light during the daytime but close the petals in dark at night. This response of dandelion flowers to light is called:
 - Phototropism.
 - Thigmonasty.
 - Chemotropism.
 - Photonasty.

* Assertion - Reasoning based questions. [3]

- In the following questions, a statement of Assertion is given by the corresponding statement of Reason. Of the statements, mark the correct answer as:
 - If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

- b. If both Assertion and Reason are true, but Reason is not the correct explanation of Assertion.
- c. If Assertion is true, but Reason is false.
- d. If Assertion is false, but Reason is true.
- e. If Assertion and Reason both are false.

Assertion: Endocrine glands are called ductless glands.

Reason: These glands direct pour their secretions into the blood.

9. In the following questions, a statement of Assertion is given by the corresponding statement of Reason. Of the statements, mark the correct answer as:
- a. If both Assertion and Reason are true and Reason is the correct explanation of Assertion.
 - b. If both Assertion and Reason are true, but Reason is not the correct explanation of Assertion.
 - c. If Assertion is true, but Reason is false.
 - d. If Assertion is false, but Reason is true.
 - e. If Assertion and Reason both are false.

Assertion: Thyroxine is secreted by thyroid gland.

Reason: Its deficiency leads to diabetes.

10. **Directions:** In the following questions, the Assertions (A) and Reason(s) (R) have been put forward. Read both the statements carefully and choose the correct alternative from the following:

Assertion: It is the brain, not the sense organs, that interprets the stimulus.

Reason: Sense organs are transducers; they transform the energy of a stimulus to the energy of nerve impulses.

- a. Both Assertion and Reason are correct and Reason is the correct explanation for Assertion.
- b. Both Assertion and Reason are correct but Reason is not the correct explanation for Assertion.
- c. Assertion is correct but Reason is incorrect.
- d. Assertion is incorrect but Reason is correct.

* **Fill in the blank with correct answer.[1 Mark each]** [2]

11. The response of leaves to the sunlight is called _____.

12. Junction between two neurons is called _____.

* **Answer the questions.[1 Mark each]** [2]

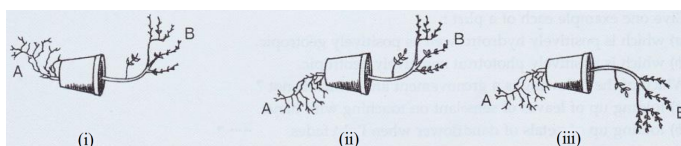
13. Which plant hormone is responsible for the wilting and falling of leaves?

14. Which parts of the body form the central nervous system?

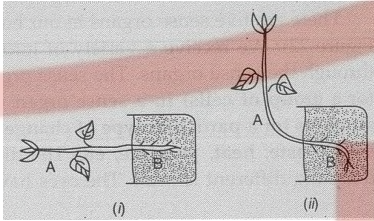
SECTION B

* **Answer the following question. :** [10]

1. A potted plant is kept horizontally for a considerable time the position of the part A and B of the potted plant are shown in the following figures:



- a. Which figure shows the correct position taken by the parts A and B of the plant?
 - b. What type of phenomenon is exhibited by the figure chosen in (a) above?
2. What is the function of receptors and effectors in our body?
 3. Name the five types of tropisms. How are tropic movements helpful to plants? Explain with an example.
 4. A potted plant having straight parts A and B was placed horizontally on its side as shown in figure (i). After a few days it was observed that the parts A and B of the plant acquire new positions as shown in Figure (ii).
 - a. Name the phenomenon exhibited by the position of plant parts A and B in Figure (ii).
 - b. Name the stimulus (other than sunlight) which causes plant part A to grow and bend upwards, and plant part B to bend downwards.



5. Explain why the tongue may be considered as both a receptor and an effector organ.

SECTION C

*** Answer short answer questions. [3 Mark each]**

[12]

1. Give one example to show how the endocrine system coordinates our body activities.
2. Adrenal glands are located on top of each kidney. What will happen if these glands do not secrete adrenaline?
3. What is the difference between the manner in which movement takes place in a sensitive plant and the movement in our legs?
4. How do we detect the smell of an incense stick (agarbatti)?

SECTION D

*** Long answer questions [5 Mark each]**

[10]

1. A potted plant is growing in a transparent glass jar. In this plant, X and Y are the two growing parts having a lot of meristematic tissue. It is observed that the part X of this plant exhibits positive geotropism but negative phototropism. On the other hand, part Y of this plant exhibits negative geotropism but positive phototropism.
 - a. Name the part X of plant.
 - b. Name the part Y of plant.
 - c. Which part of the plant, X or Y, will exhibit positive hydrotropism?
 - d. Which part of the plant, X or Y, can have tendrils on it?
 - e. Which phytohormone causes the part X to exhibit negative phototropism?
2. Name five stimuli which act on plants. Name the type of tropism produced by each one of these stimuli.

SECTION E

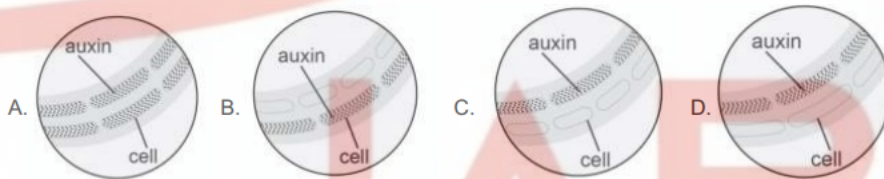
*** case - based/data -based questions**

[4]

1. The figure shows the movement of a stem. X is a part of the stem. The movement of plant hormone auxin in cells regulates cell elongation and growth of plants in a particular direction.



1. What would the size of cells and the distribution of auxin at part X of the stem look like?



2. How can the movement of the stem in a particular direction be described?

- A. Against gravity
 - B. Away from touch
 - C. Away from chemicals
 - D. Towards a source of water
3. Cell division in plants is promoted by _____.
- A. Auxin
 - B. Abscisic acid
 - C. Cytokinins
 - D. Gibberellins

॥ ज्ञानं एव श्रमस्य पुंजः ॥