

PRACTICE PAPER 01 (2026-27)
CHAPTER 06: CONTROL AND COORDINATION

SUBJECT: SCIENCE

MAX. MARKS : 40

CLASS : X

DURATION : 1½ hrs

General Instructions:

- (i) All questions are compulsory.
- (ii) This question paper contains **20** questions divided into five Sections A, B, C, D and E.
- (iii) **Section A** comprises 10 MCQs and Assertion-Reason questions of **1 mark** each. **Section B** comprises 4 Very Short Answer questions of **2 marks** each. **Section C** comprises 3 Short Answer questions of **3 marks** each. **Section D** comprises 1 Long Answer question of **5 marks**. **Section E** comprises 2 Case Study Based questions of **4 marks** each.
- (iv) There is no overall choice. Internal choice is provided in Section E.
- (v) Use of calculators is not permitted.

SECTION - A

Questions 1 to 10 carry 1 mark each.

1. In a neuron, information from the environment is first acquired at the
 - (a) axon
 - (b) dendritic tip
 - (c) cell body
 - (d) end of the axon
2. Involuntary actions such as blood pressure, salivation and vomiting are controlled by the
 - (a) cerebellum
 - (b) medulla in the hind-brain
 - (c) fore-brain
 - (d) spinal cord
3. Which plant hormone inhibits growth and causes wilting of leaves?
 - (a) Auxin
 - (b) Gibberellin
 - (c) Absciscic acid
 - (d) Cytokinin
4. The growth of a pollen tube towards the ovule is an example of
 - (a) phototropism
 - (b) geotropism
 - (c) hydrotropism
 - (d) chemotropism
5. Deficiency of growth hormone in childhood leads to
 - (a) goitre
 - (b) diabetes
 - (c) dwarfism
 - (d) swollen neck
6. When the leaves of a sensitive plant (chhui-mui) are touched, they fold up because the plant cells
 - (a) contract using special proteins
 - (b) change shape by changing the amount of water in them
 - (c) grow faster on one side
 - (d) receive impulses through nervous tissue
7. A squirrel facing danger prepares to fight or run away. The hormone responsible and the gland secreting it are
 - (a) thyroxin – thyroid
 - (b) adrenaline – adrenal gland
 - (c) insulin – pancreas
 - (d) growth hormone – pituitary

8. Which one of the following pairs of hormone and endocrine gland is correctly matched?

- (a) Thyroxin – Pancreas
- (b) Insulin – Pituitary
- (c) Testosterone – Testes
- (d) Oestrogen – Thyroid

In the following questions 9 and 10, a statement of Assertion (A) is followed by a statement of Reason (R). Mark the correct choice as:

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (b) Both (A) and (R) are true but (R) is not the correct explanation of (A).
- (c) (A) is true but (R) is false.
- (d) (A) is false but (R) is true.

9. **Assertion (A):** Reflex arcs are formed in the spinal cord.

Reason (R): Nerves from all over the body meet in a bundle in the spinal cord on their way to the brain.

10. **Assertion (A):** Electrical impulses can reach each and every cell of the animal body.

Reason (R): Once a cell generates and transmits an electrical impulse, it takes some time to reset before it can transmit a new one.

SECTION - B

Questions 11 to 14 carry 2 marks each.

- 11. (a) Trace the path of a nerve impulse through a neuron.
(b) What is a synapse? How is the impulse passed on across it?
- 12. Sugar tastes less sweet when you eat it with your nose blocked.
(a) Name the receptors that detect taste and smell, and the sense organs where they are located.
(b) Suggest why food seems less tasty when we have a cold.
- 13. The brain and spinal cord are delicate organs. How does the body protect (a) the brain and (b) the spinal cord?
- 14. Compare the way movement takes place in the leaves of a sensitive plant with the movement in our legs.

SECTION - C

Questions 15 to 17 carry 3 marks each.

- 15. (a) Why is the fore-brain called the main thinking part of the brain?
(b) After a head injury, a man can think clearly but cannot walk in a straight line or pick up a pencil properly. Which part of his brain is likely damaged? Justify.
(c) Which part of the brain controls our feeling of having eaten enough?
- 16. (a) Plants show two types of movement. Name them and give one example of each.
(b) How do the root and the shoot respond to gravity? Name this response.
(c) Design a simple experiment to show hydrotropism.
- 17. (a) Why is it advised to use iodised salt? Name the disease caused by its deficiency and one symptom.
(b) Which gland produces insulin and what is its function? Why are some diabetic patients given insulin injections?

SECTION - D

Question 18 carries 5 marks.

18. (a) State two limitations of using electrical impulses for communication in the body.
(b) How does chemical communication overcome these limitations?
(c) How does adrenaline prepare the body to deal with an emergency? Mention three changes it brings about.
(d) How is the timing and amount of hormone released regulated? Explain with an example.

SECTION - E (Case Study Based Questions)

Questions 19 and 20 carry 4 marks each.

19. Riya accidentally touched a hot vessel and pulled her hand away immediately, even before she felt the pain. The flow chart shows the sequence of events. Study it and answer the questions.

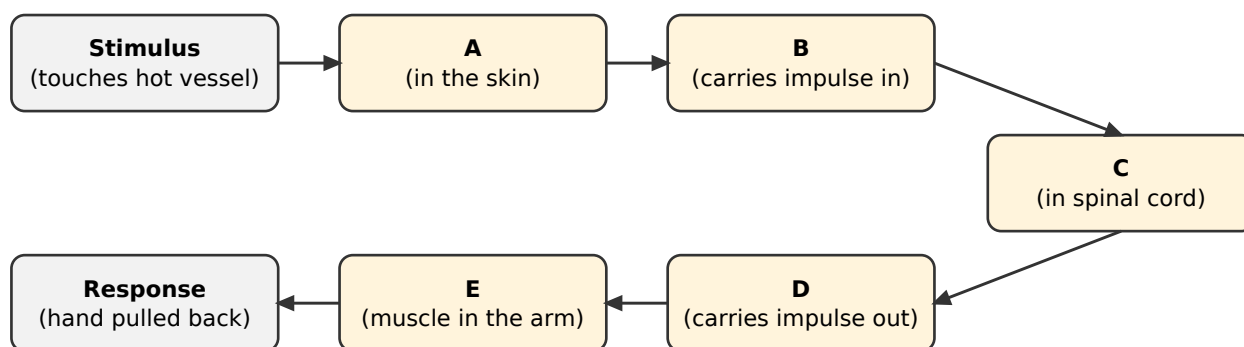


Figure: Sequence of events in a reflex action

- (a) Identify A and E. **(1)**
(b) Name B, C and D. **(1)**
(c) What is this pathway called? Why is this response faster than one in which the brain first thinks about the sensation? Does the information reach the brain at all? **(2)**

OR

- (c) How is a reflex action different from walking? Give one example of an involuntary action and name the part of the brain controlling it. **(2)**

20. A student read about four plant hormones P, Q, R and S and recorded her notes in the table below.

Hormone	Observation recorded by the student
P	Made at the shoot tip; helps cells grow longer; moves to the shady side of the shoot
Q	Like P, helps in the growth of the stem
R	Promotes cell division; found in large amounts in fruits and seeds
S	Inhibits growth; its effects include wilting of leaves

- (a) Identify hormones P and S. **(1)**
(b) Identify Q and R. Why is R present in greater concentration in fruits and seeds? **(1)**
(c) Using hormone P, explain why a shoot kept near a window bends towards the light. **(2)**

OR

- (c) What are plant hormones? How do they reach their area of action? Why do plants need hormones like S as well as P, Q and R? **(2)**