SECOND TERM SUMMATIVE ASSESSMENT 2026-27

MODEL QUESTION PAPER

BIOLOGY

Std: X SET 1 **Score: 40**

Cool-off time: 15 minutes **Time: 1½ Hours**

Instructions

- The first 15 minutes is cool-off time. Use it to read the questions and plan your answers.
- Answer according to the instructions and the score given for each question.
- For questions with a choice (A or B), answer only one.

Answer all questions from 1 to 4. Each question carries 1 score. **(4 × 1 = 4)**

1. Which part of the brain coordinates muscular activities and maintains the balance of the body? (1)

A. Cerebrum B. Cerebellum C. Medulla oblongata D. Thalamus

2. Assertion (A): Reflex actions take place very quickly. (1)

Reason (R): In a spinal reflex, the impulse is processed in the spinal cord and the response begins without waiting for a decision from the brain.

A. Both A and R are correct and R is the correct explanation of A.

B. Both A and R are correct but R is not the correct explanation of A.

C. A is correct but R is wrong.

D. A is wrong but R is correct.

3. Some statements about photoreceptors are given. (1)

(i) Rod cells help us to see in dim light.

(ii) Cone cells contain the pigment rhodopsin.

(iii) Cone cells help us to see colours.

(iv) Rod cells are crowded in the yellow spot.

Choose the correct statements.

A. (i) and (ii) B. (i) and (iii) C. (ii) and (iv) D. (iii) and (iv)

4. Match the hormones with the glands. (1)

Hormone	Gland
a) Thyroxine	(i) Pineal gland
b) Insulin	(ii) Thyroid gland
c) Melatonin	(iii) Pancreas

A. a-(ii), b-(iii), c-(i) B. a-(iii), b-(ii), c-(i)

C. a-(i), b-(iii), c-(ii) D. a-(ii), b-(i), c-(iii)

Answer all questions from 5 to 11. Questions 7 and 11 have choice. Each question carries 2 scores. **(7 × 2 = 14)**

5. DNA and RNA are nucleic acids.

a) Which nitrogen base pairs with adenine in DNA? (1)

b) Which nitrogen base is present in RNA in place of thymine? (1)

6. The spinal cord is a part of the central nervous system.

a) Where is the white matter seen in the spinal cord? (1)

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b) Write two functions of the spinal cord. (1)

7. (A) Write the effect of the sympathetic and the parasympathetic systems on
a) the heartbeat b) the pupil (2)

OR

(B) Cerebrospinal fluid is seen in the brain and spinal cord.
a) Where is it found? (1)
b) Write two of its functions. (1)

8. Sound vibrations reach the inner ear through the middle ear.
a) Which part of the inner ear changes vibrations into impulses? (1)
b) What is the role of the ear ossicles? (1)

9. Food seems tasteless when we have a cold.
a) Where are the taste receptors located? (1)
b) Why does food seem tasteless during a cold? (1)

10. a) Name the plant hormone that helps fruits to ripen. (1)
b) Name the plant hormone that causes cell elongation and apical dominance. (1)

11. (A) Goitre is seen in some people.
a) Which gland is affected? (1)
b) Write the reason for this condition. (1)

OR

(B) What happens when growth hormone is produced
a) in excess during childhood? b) in less quantity during childhood? (2)

Answer all questions from 12 to 17. Questions 12 and 17 have choice. Each question carries 3 scores. (6 × 3 = 18)

12. (A) Anu's hand touched a hot vessel and she withdrew it at once.
a) What type of action is this? (1)
b) Write the path of the impulse in this action in the correct order. (2)

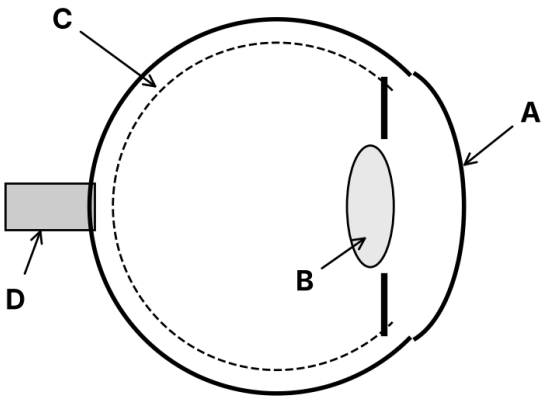
OR

(B) Match the parts of the brain with their functions and write them.

Part	**Function**
a) Cerebrum	(i) Controls body temperature and hunger
b) Hypothalamus	(ii) Controls heartbeat and breathing
c) Medulla oblongata	(iii) Thinking, memory and intelligence

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13. Observe the figure of the human eye.



a) Identify A and C. (1)
b) Write the function of B. (1)
c) How is the information from C carried to the brain? (1)

14. The level of glucose in the blood is controlled by hormones.
a) Which hormone is secreted when the blood glucose level rises? (1)
b) Write the action of glucagon. (1)
c) Write one symptom of diabetes mellitus. (1)

15. A student felt his heart beating fast when he saw a snake on the road.
a) Which hormone is responsible for this? (1)
b) Name the gland that secretes it. (1)
c) Write two other changes that this hormone brings about in the body. (1)

16. Ants are seen moving in a line, one behind the other.
a) Which chemical substance helps them to do this? (1)
b) What are pheromones? (1)
c) How are pheromones used to control pests in agriculture? (1)

17. (A) The hypothalamus controls the pituitary gland.
a) How does the hypothalamus control the anterior pituitary? (1)
b) Name the two hormones produced by the hypothalamus and stored in the posterior pituitary. (1)
c) Why is the pituitary known as the master gland? (1)

OR

(B) Impulses pass from one neuron to the next through synapses.
a) What is a synapse? (1)
b) What is the role of neurotransmitters? (1)
c) Name one neurotransmitter. (1)

Question 18 has choice. It carries 4 scores. **(1 × 4 = 4)**

18. (A) Some diseases affect the nervous system.
a) Write the cause of Alzheimer's disease. (1)
b) Which deficiency leads to Parkinson's disease? (1)
c) Write one symptom of epilepsy. (1)
d) How should we treat people suffering from such diseases? (1)

OR

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(B) Plant hormones are used in agriculture.

a) Which hormone is used to increase the length of the stem of sugarcane? (1)

b) Write one function of cytokinin. (1)

c) Name the hormone that causes the falling of leaves. (1)

d) Write one use of synthetic plant hormones in agriculture. (1)

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