SECOND TERM EVALUATION 2024-25

BIOLOGY MODEL QUESTION PAPER

Standard: IX
Time: 1 ½ Hour
Total Score: 40

Instructions:

1. **The first 15 minutes are for reading the questions carefully.**
2. **Write answers according to the given instructions.**
3. **Ensure answers reflect the allocated marks and time.**

Section A: Answer any 5 questions (Each question carries 1 mark)

(5 × 1 = 5)

1. Which part of the nephron is responsible for ultrafiltration?
2. Identify the type of movement in plants caused by gravity.
   a) Phototropism
   b) Geotropism
   c) Chemotropism
   d) Hydrotropism
3. Which characteristic of alveoli enhances gaseous exchange efficiency?
4. Name the pigment present in red blood cells that helps in oxygen transport.
5. What is the main excretory organ in an amoeba?

Section B: Answer any 6 questions (Each question carries 2 marks)

(6 × 2 = 12)

6. Compare the processes of inspiration and expiration based on:
   - The movement of the diaphragm
   - Changes in the thoracic cavity
7. Write a short note on the significance of haemoglobin in oxygen transport.
8. Explain the role of stomata in gaseous exchange during photosynthesis and respiration.
9. Describe how the concentration gradient facilitates alveolar exchange of gases.
10. What is anaerobic respiration? Mention one example where it occurs in the human body.
11. List two differences between cartilage and bone based on their structure and function.
12. Draw a flowchart depicting the path of air from the nostrils to the alveoli.

Section C: Answer any 5 questions (Each question carries 3 marks)

(5 × 3 = 15)

13. Describe the three phases involved in urine formation: ultrafiltration, reabsorption, and secretion.
14. Discuss how nastic movements in plants differ from tropic movements, providing examples for each.
15. What are the structural adaptations of alveoli that make them suitable for gaseous exchange?
16. Complete the table:

Joint Type	Peculiarity	Example
Ball and Socket	Allows movement in all directions	Shoulder Joint
Hinge Joint		
Pivot Joint		Neck Joint
Gliding Joint	Smooth sliding of bones	

17. Explain the role of lenticels in gaseous exchange in woody plants.

Section D: Answer any 2 questions (Each question carries 4 marks)

(2 × 4 = 8)

18. Study the diagram of the nephron and:
    - Label the Bowman's capsule, collecting duct, glomerulus, and loop of Henle.
    - Explain the process of ultrafiltration in the glomerulus.
19. Based on the phases of cellular respiration:
    a) Differentiate between glycolysis and the Krebs cycle.
    b) State the total ATP yield during these processes.
20. Extended response: Explain the importance of cartilages in joints and their role in reducing friction. Provide examples of where cartilages are found in the human body.