

Section A - Multiple Choice Questions

- Q1. Which of the following is a chemical change? A) Melting of ice B) Burning of wood C) Boiling of water D) Dissolving sugar in water (1 marks)
- Q2. What is the SI unit of electric current? (1 marks)
- Q3. The process of converting solar energy into electrical energy is called: (1 marks)
- Q4. Which of the following is not a component of blood? (1 marks)
- Q5. What is the function of the mitochondria in a cell? (1 marks)
- Q6. Explain the process of photosynthesis and its importance. (1 marks)
- Q7. What are the different types of chemical reactions? Give examples of each. (1 marks)
- Q8. Describe the structure and function of the human nervous system. (1 marks)
- Q9. Explain the concept of sustainable development and its importance in the context of environmental conservation. (1 marks)

Section B - Fill in the Blanks

- Q10. The chemical formula of water is _____. (1 marks)
- Q11. The process by which plants make their own food is called _____. (1 marks)
- Q12. The unit of electric power is _____. (1 marks)
- Q13. The basic unit of heredity is _____. (1 marks)
- Q14. The process of separating components of a mixture based on their boiling points is called _____. (1 marks)

Section C - Short Answer Questions

- Q15. State the law of conservation of mass. (3 marks)
- Q16. Explain the difference between renewable and non-renewable resources. (3 marks)
- Q17. Define the terms 'refraction' and 'reflection' of light. (3 marks)

Q18. What are acids and bases? Give examples of each. (3 marks)

Q19. Explain the process of digestion in humans. (3 marks)

Q20. Describe the structure and function of the human heart. (3 marks)

Section D - Long Answer Questions

Q21. Explain the working of an electric motor with a labeled diagram. (5 marks)

Q22. Describe the different types of pollution and their effects on the environment. (5 marks)

Q23. Explain the process of reproduction in flowering plants. (5 marks)

Q24. Discuss the Mendelian laws of inheritance. (5 marks)

Section E - Matching Questions

Q25. Match the following: (4 marks)

Match the following: A. Photosynthesis 1. Powerhouse of the cell B. Respiration 2. Production of food C. Mitochondria 3. Release of energy D. Chloroplast 4. Site of photosynthesis

Section F - Case Study

Q26. A farmer observes that his crops are not growing well. He suspects a deficiency in nutrients. Discuss the possible nutrient deficiencies, their symptoms, and how they can be addressed. Include a discussion on the importance of soil testing. (5 marks)