

**Section A - Multiple Choice Questions**

- Q1. Which of the following is a renewable source of energy? (3 marks)
- Q2. What is the chemical formula for methane? (3 marks)
- Q3. What is the SI unit of electric current? (3 marks)
- Q4. Which of the following is NOT a part of the human digestive system? (3 marks)
- Q5. Explain the process of photosynthesis. (3 marks)
- Q6. Describe the different types of chemical reactions with examples. (3 marks)

**Section B - Fill in the Blanks**

- Q7. The process of converting light energy into chemical energy is called \_\_\_\_\_. (1 marks)
- Q8. The basic unit of heredity is called a \_\_\_\_\_. (1 marks)
- Q9. The force of attraction between two objects due to their masses is called \_\_\_\_\_. (1 marks)
- Q10. The process by which plants lose water in the form of vapor is called \_\_\_\_\_. (1 marks)

**Section C - Short Answer Questions**

- Q11. State the laws of reflection of light. (3 marks)
- Q12. Explain the difference between a physical change and a chemical change. (3 marks)
- Q13. Define the terms 'refraction' and 'dispersion' of light. (3 marks)
- Q14. What are the different types of blood groups? (3 marks)
- Q15. Explain the concept of the ozone layer and its importance. (3 marks)

**Section D - Long Answer Questions**

- Q16. Explain the structure and function of the human heart. (5 marks)
- Q17. Describe the different types of pollution and their effects on the environment. (5 marks)

- Q18. Explain the process of respiration in plants and animals. (5 marks)
- Q19. Explain the working principle of an electric motor. (5 marks)
- Q20. Describe the different types of chemical bonds. (5 marks)
- Q21. Explain Mendel's laws of inheritance. (5 marks)
- Q22. Discuss the importance of conservation of natural resources. (5 marks)
- Q23. Explain the different types of energy sources. (5 marks)
- Q24. Explain the structure of an atom and its subatomic particles. (5 marks)
- Q25. Explain the process of electrolysis. (5 marks)
- Q26. Explain the different types of motion. (5 marks)

## Section E - Matching Questions

**Q27. Match the following: (4 marks)**

Column A

1. Force
2. Velocity
3. Acceleration
4. Work

Column B

- a.  $\text{m/s}^2$
- b. Joule
- c. Newton
- d.  $\text{m/s}$

## Section F - Case Study

Q28. A farmer observes that his crops are not growing well. He notices that the soil is lacking in certain nutrients. Discuss the possible causes of poor crop growth, the importance of soil testing, and suggest methods to improve soil fertility. Explain the role of fertilizers and manures in this context. (9 marks)