



**DELHI PUBLIC SCHOOL SURAT  
BIOLOGY**

Roll No: 

Class: XI

Marks: 70

Time Allowed: 3 Hrs.

**Instructions:**

- a) All questions are compulsory.
- b) The question paper consists of four sections A, B, C and D. Section A contains 5 questions of 1 marks each, Section B contains 7 questions of 2 marks each, Section C contains 12 questions of 3 marks each, Section D contains 3 questions of 5 marks each. Choices are given in all questions in five marks i.e. Section D.
- c) Wherever necessary, the diagrams drawn should be neat and properly labeled.
- d) This question paper contains 2 pages.

**SECTION A**

1. Write the two postulates of cell theory given by Shleiden and Schawnn. [1]
2. Expand RuBisCO and PEP. [1]
3. Write dental formula of human. [1]
4. Name the proteins, which are present in thin and thick filament of muscle fibre. [1]
5. a) Which hormone is secreted by heart? [1]  
b) Write the function of the same.

**SECTION B**

6. Write name of four major groups of Protozoans. Give one example of each. [2]
7. Differentiate the two basic body forms present in Cnidaria with one example for each. [2]
8. Diagrammatically represent the various types of vascular bundle. [2]
9. Cockroach is nocturnal in nature. Explain in brief, the salient features, which help it to adapt in this manner. [2]
10. State the criteria on which Magnesium is considered as an essential element in plant body. [2]
11. Sunita went to attend sports day in her husband's company ground with her friend Dr. Veena. While observing races she discussed various concepts regarding muscular movement. She was surprised to know about the importance of proteins. Explain in brief the arrangement of various protein during muscular movement. [2]
12. What would happen in the absence of the following: [2]  
a) Vestibular apparatus b) medulla oblongata c) Fovea d) Corpus callosum

**SECTION C**

13. 'Double fertilization is a unique event in angiosperm.' Justify. [3]

14. Define the following terms: [3]  
 a) Venation                                      b) Placentation                                      c) Inflorescence  
 d) Zygomorphic flower                                      e) Monodelphous                                      f) Parthenocarpic fruit
15. a) Draw a neat- labeled diagram of fluid mosaic model of plasma membrane. [3]  
 b) Write the role of middle lamella in plant cell.
16. Differentiate between primary and secondary metabolites. Give some examples of secondary metabolites. [3]
17. Define cell cycle. Explain, different stages of cell cycle in brief. [3]
18. 'Transpiration is the necessary evil in plants.' Justify. [3]
19. Photorespiration reduces the photosynthetic yield in C3 plants. Why? [3]
20. Explain Calvin Cycle. [3]
21. Expand TCA cycle. Describe the pathway in brief. [3]
22. Discuss the following phenomenon present in the growth of a plant tissue. [3]  
 a) Differentiation b) Dedifferentiation c) Redifferentiation
23. a) Carbondioxide play important role in regulation of respiration. Explain in brief. [3]  
 b) If diaphragm were not present what would happen?
24. How feedback mechanism regulates kidney function? [3]

#### SECTION D

25. Differentiate between the following: [5]  
 a) Endarch and Exarch    b) Stele and periderm    c) Heartwood and sap wood  
 d) Lenticles and stomata e) T.S. of monocot and dicot
- OR**
- Differentiate between isobilateral and dorsiventral leaf. Draw neat- labeled diagram to support your answer.
26. Describe mitosis. Write its significance. Draw neat labeled diagram for the same. [5]
- OR**
- Describe prophase I. Draw neat-labeled diagram in support of your answer.
27. a) What is blood? Describe its components. [5]  
 b) Differentiate between arteries and veins.  
 c) Give a diagrammatic presentation of a standard ECG.
- OR**
- a) Draw a neat-labeled diagram of sectional view of human heart.  
 b) Discuss Angina and Coronary heart disease.

**END OF EXAMINATION**