CBSE SAMPLE PAPER –03 (unsolved)

Class-XI

BIOLOGY (THEORY)

Time: 3 Hrs **MM: 70**

General Instructions

1. The question paper comprises of five Sections A, B, C, D and E.
2. All questions are compulsory.
3. There is no overall choice however; internal choice has been provided in one question of 2 marks, one question of 3 marks and all the two questions of five marks category. Only one option in such question is to be attempted.
4. Questions1 to 5 in section A are very short questions of one mark each. These are to be answered in one word or one sentence each.
5. Questions 6 to 9 in section B are short questions of two marks each. These are to be answered in approximately 20-30 words each.
6. Questions 10 to 20 in section C are questions of three marks each. These are to be answered in approximately 30-50 words each. Question 21 is of 4 marks.
7. Questions 22 to 23 in section D are questions of five marks each. These are to be answered in approximately 80-120 words each.
8. Questions 24 to26 in section E is based on OTBA of 10 marks.

Section – A

1. What types of joints are found in skull bones and shoulder joint?
2. What is serum?
3. Define inspiratory reserve volume?
4. Mention two important functions of large intestine.
5. Why is the concentration of certain ions significantly higher in the vacuole than in the cytoplasm?

Section – B

6. What would happen if you forget to add cytokinins to the culture medium of plant tissue culture?

7. What is hydroponics? How is it carried?

8. What is binomial nomenclature? Explain with an example.

9. Differentiate parenchyma and collenchyma.

   Or

   Give the overall equation of the chemical changes that take place in pyruvic acid during aerobic respiration in mitochondria.

Section – C

10. Differentiate hyperglycemia and hypoglycemia.

11. Cell is the basic unit of life. Discuss.

12.

   a) Name two red algae from where agar is obtained.

   b) Write the structural formula of adenosine.

13. What is photophosphorylation? Name its types and differentiate them.

14. Describe the secondary structure of proteins. Give an example.

15. Differentiate open circulation and closed circulation.

   Or

   Explain the mechanism of generation of light-induced impulses in the retina.

16. Explain three common symptoms of deficiency of mineral nutrients in plants with example of an element that causes each of them.

17. Enumerate the chemical events that occur in the process of blood clotting.

18. Write six distinguishing features of class Mammalia.

19. What is pulmonary circulation? Describe its importance.

20. Describe competitive inhibition of enzyme activity with an example.

21. **Radhika and Rekha are good friend. Radika father is a doctor but Rekha father is a worker in asbestos factory. One day Radhika visits to Rekha's home. She observed that her father is suffering from fibrosis and inflammation of lung with regular coughing. Radhika took them to her father clinic for diagnosis.**

a. What values do you find in Radhika?

b. What is the possible cause of this disease?

c. What common name is given to this kind of disease?

Section – D

22. Draw an animal cell as seen under an electron microscope and label 10 parts in it.

Or

Define turgor pressure. Describe the opening and closing of stomata with an emphasis on the role of potassium ions in the process.

23.

a) What is centromere?

b) How does the position of centromere form the basis of classification of chromosomes?

c) Support your answer with a diagram showing the position of centromere

d) on different types of chromosomes.

Or

a. What is photoperiodism?

b. How are plants classified based on their photoperiodic response?

c. Explain with an example each.

Section-E (OTBA) Questions

24.	OTBA Question	2 mark
25.	OTBA Question	3 mark
26.	OTBA Question	5 mark