

**CBSE SAMPLE PAPER - 4 (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. Questions 1 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 to 26 in section E is based on OTBA of 10 marks.

**Section - A**

1. Where do you find red muscle fibres in man?
2. What do the terms phycobionts and mycobionts signify?
3. Define plasmolysis.
4. Name two vitamins that contain sulphur.
5. Which tissue is present in the petiole of a leaf and what causes grittiness in the pulp of certain fruits such as pear?

**Section - B**

6. Differentiate photophosphorylation and oxidative phosphorylation.
7. Differentiate essential and non-essential amino acids.

8. Write a short note on leg-haemoglobin.
9. Draw the reproductive system of earthworm.

Or

- a) Define co-factors.
- b) What is glycosidic bond?

### Section - C

10. Define RQ. Give the value for fats and carbohydrates.

Or

Describe the nervous system of an earthworm.

11. How do neutral solutes move across the plasma membrane? Can the polar molecules also move across it in the same way? If not, how are they transported across the membrane?
12. Describe the blood vascular system of a frog.
13. What is vestibular system? Mention its function.
14. Differentiate metaphase of mitosis and meiosis.
15. Describe vexillary aestivation.
16. Explain the sigmoid growth curve in plants.
17. Describe the secondary growth that occurs in dicot roots.
18. How is gut lining protected from its own secretion of proteases?
19. Differentiate symport and antiport.
20. Give the functions of hydrochloric acid in human stomach.
21. **During a visit to a government office with his father, young Pratap saw dirty spittoons in every corner of the building. Some people were spitting paan and**

gutka through the window grills. As soon as he objected to their action, Pratap was scolded by some persons and the quarrel between the two parties became a matter of concern. The very next week Pratap was amazed to see the walls cleaned, no spittoons and a notification hung to maintain cleanliness and hygiene inside the office. The officer appreciated Pratap.

- a) What values are promoted through the incident?
- b) Which diseases are transmitted through droplets and air?
- c) How does chewing paan or gutka cause health hazard?

#### **Section - D**

22. Who proposed the model of DNA? Describe the structure of DNA.

Or

- a) What is cardiac cycle?
- b) Describe various steps of cardiac cycle with reference to heart sound.

23. Describe the sequence of the events in mitosis.

Or

- a) Explain the process of secondary growth in dicot stem with the help of diagram.
- b) Mention its significance.

#### **Section-E (OTBA) Questions**

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