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 is fibroin?
2. The term to describe vascular bundles in which phloem lies at the centre surrounded by xylem.
3. What is meant by 'in vitro'?
4. Name two accessory digestive organs in humans.
5. What type of modification of root is found in a) Banyan tree b) Mangrove trees?

Section – B

6. Differentiate primary phloem from secondary phloem.
7. What is meant by apoplast pathway? Why does it occur in cortex and not in endosperm?

Or

Differentiate fibrous joints and cartilaginous joints.

8. What are the structures of Golgi complex?

9. Differentiate dicot stem and monocot stem.

Section – C

10. Give the structural formula of a) Glycine, b) Alanine and c) Serine.

11. Draw the labelled diagram of circulatory system of cockroach.

12. Draw a diagram of mitochondrion.

13. Draw the different types of aestivation.

14. Give all the six classes of enzymes.

15. What is phyllotaxy? Give one difference between racemose and cymose inflorescence.

16. Relate the following with the phylum: radial symmetry, haemocoel, water vascular system, setae, pneumatic bones and radula.

17. Draw a labelled diagram of fluid mosaic model of plasma membrane.

Or

Draw the floral diagram of fabaceae.

18. Explain with examples the three categories of plants based on photoperiodism.

19. Explain mechanism of transpiration in plants?

20. Give the names of 4 classes of kingdom fungi.

21. Give 4 differences between cyclic and non-cyclic photophosphorylation

22. **Joy loves to play football and was selected as captain of the school team for the district level tournament. He also does social work. He attended a blood donation camp to donate blood and came to know that he was HIV positive. He lost interest in games and refused to play or study. He started counting his days. He remained**

absent from school for a long time. The Biology teacher visited his house and counselled him. Joy was back at school and also played the tournament.

a) What sense of responsibility did the Biology teacher exhibit?
b) A person detected to be HIV positive should be isolated in the society? Do you agree?Why/ Why not?
c) How is AIDSspread?

Section – D

23. Explain both pathways of water and ion absorption and movement in roots with neat sketch.

Or

Describe briefly the deficiency symptoms seen in plants.

24. Explain androecium and gynoecium in flowering plants.

Or

Briefly explain the cardiac cycle.

Section-E (OTBA) Questions

25. OTBA Question 2 mark

26. OTBA Question 3 mark

27. OTBA Question 5 mark