CBSE
Class XI Biology
Sample Paper – 6

Time: 3 hrs **Total marks: 70**

General instructions:

1. All questions are compulsory.
2. The question paper consists of four sections A, B, C and D.
3. Internal choice is given in all the sections. A student has to attempt only one of the alternatives in such questions.
4. Section A contains 5 questions of 1 mark each.
5. Section B has 7 questions of 2 marks each.
6. Section C is of 12 questions of 3 marks each.
7. Section D has 3 questions of 5 marks each.
8. Wherever necessary, the diagrams drawn should be neat and properly labelled.

SECTION A

1. When is the coelom said to be a true coelom? [1]

OR

What kind of body cavity do the arthropods and nematodes have?

2. What are oothecae? [1]

3. Why is cellulose considered a homopolymer? [1]

4. Name the connecting link between glycolysis and the Krebs cycle. [1]

OR

Name the enzymes which catalyse the incomplete oxidation of glucose in yeast.

5. What is the name given to the bulb-like structures at axon terminals? [1]

SECTION B

6. Name two heterosporous ferns. Why are they called so? [2]

7. What is the site of fat digestion in humans? Name the enzyme which digests fats. Mention the end-product of fat digestion. [2]

8. Why is the axoplasm of a resting axon negatively charged? [2]

9. Amoeba multiplies by mitotic cell division. Is this phenomenon growth or reproduction? [2]

10. Differentiate between chromatin and chromosomes. [2]

OR

Mention two functions of the following:

i. Polysaccharides
ii. Amino acids

11. State any two points of differences between adipose tissue and blood tissue. [2]

12. Draw a well-labelled diagram of a mitochondrion. [2]

OR

List the functions of the cytoskeleton.

SECTION C

13. Name the type of fertilisation which is unique to angiosperms. Describe it. [3]

OR

Explain the modes of reproduction in Ulothrix.

14. Name and explain the portal systems found in frogs. [3]

15. Cork cambium forms tissues which form the cork. Do you agree with this statement? Explain. [3]

16. How is a pinnately compound leaf different from a palmately compound leaf? [3]

17. What is a cell wall? Mention the functions of a plant cell wall. [3]

18. Draw a labelled diagram of chloroplast. [3]

OR

Multicellular organisms have division of labour. Explain.

19. Name the stage of the cell cycle at which one of the following events occur: [3]

i. Chromosomes are moved to the spindle equator.
ii. Centromere splits and chromatids separate.
iii. Pairing between homologous chromosomes takes place.

20. What is a photosystem? Which is the pigment which acts as a reaction centre? [3]

21. What is cretinism? Give any two causes of it. [3]

OR

Represent diagrammatically the action of the hormone oestrogen.

22. Describe three disorders of the skeleton and joints. [3]

23. What are the factors affecting the rate of diffusion? [3]

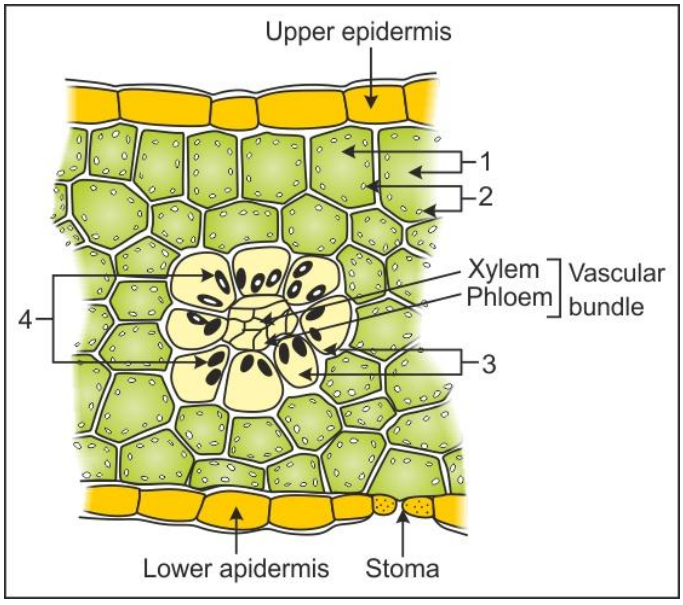
24. What is imbibition pressure? What is the usefulness of imbibition pressure to seed germination? [3]

OR

Explain the three physical properties of water which help in the ascent of sap in plants.

SECTION D

25. A portion of the cross-section of a leaf is shown in the diagram. Answer the following: [5]

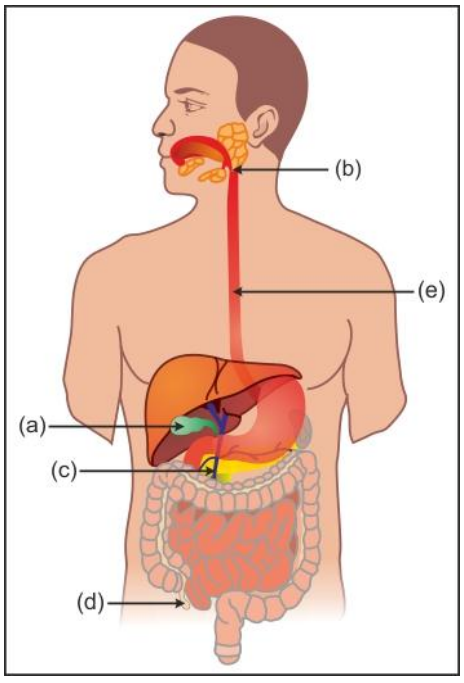


i. Label 1 to 4.
ii. What kind of anatomy is shown in the diagram?
iii. Write the structure and function of 2 and 4.

OR

List five main groups of natural plant growth regulators. Write a note on the discovery, physiological functions and agricultural/horticultural applications of any one of them.

26. In the given diagram of the alimentary canal of man, label five parts mentioned as (a) to (e) and give their functions. [5]



OR

Draw a neat and labelled diagram of the human ear and explain its structure.

27. Give a brief account of the counter-current mechanism. [5]

OR

(a) Describe the role of haemoglobin in the transport of respiratory gases.

(b) What is the function of carbonic anhydrase? Where is it operative?