

CBSE
Class XI Biology
Sample Paper – 7

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.
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SECTION A

1. Why are animals of Aschelminthes called roundworms? [1]
2. When do you refer to a vascular bundle as a closed bundle? [1]
3. What is the feature of a metacentric chromosome? [1]

OR

State the function of the smooth endoplasmic reticulum.

4. Name the reduced form of ubiquinone. [1]
5. Which is the major site for the production of RBCs? [1]

OR

How many action potentials SAN can generate per minute?

SECTION B

6. What are mycorrhizae? How does it benefit the plant? [2]
7. Describe the two ways by which transport of oxygen takes place in the blood. [2]
8. Amylase is secreted by two glands. Name them. What is the action of amylase on food?[2]

9. What are plasmids? What characters do they confer to bacteria? [2]

OR

Differentiate between prosthetic group and coenzyme.

10. What is diatomaceous earth? Mention any two economic uses of it. [2]

OR

What important ecological role do chemosynthetic bacteria play?

11. What are guard cells? What is their function? [2]

12. Give the structural formula of [2]

- (a) Uracil
- (b) Uridine

SECTION C

13. If both gymnosperms and angiosperms bear seeds, then why are they classified separately? [3]

14. Distinguish between adipose and blood tissues. [3]

OR

What are the following and where do you find them in the animal body?

- (a) Chondrocytes
- (b) Axon
- (c) Ciliated epithelium

15. Answer the following with reference to the anatomy of a dicot root: [3]

- i. Where is the pericycle located?
- ii. How are xylem vessels arranged?
- iii. What do you call such an arrangement?

16. What are the following and where do you find them in the animal body? [3]

- i. Chondrocytes
- ii. Axons
- iii. Ciliated epithelium

17. What is the significance of meiosis? [3]

OR

Describe the events in the prophase of animal cells.

18. What are leucoplasts? Mention their types. [3]

19. What is a mesosome in a prokaryotic cell? Mention the functions which it performs. [3]

20. Differentiate between glycolysis and fermentation. [3]

21. What are bulliform cells? Mention their important function. [3]

OR

(a) Mention the four special features of C_4 plants.

(b) What do you understand by mass or the bulk flow system?

22. Explain briefly the structure and function of the human middle ear. [3]

23. Give the full form of FSH. Name the gland which secretes it. How does it differ in its function in a male and a female? What stops its secretion in a female? [3]

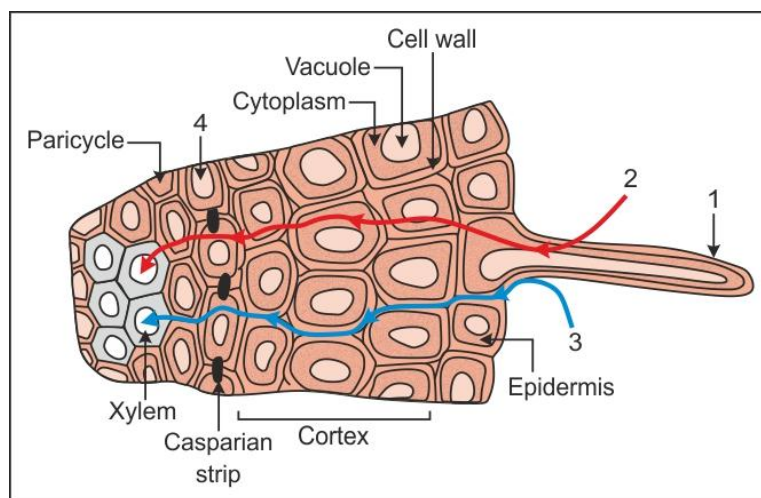
24. What is hydroponics? Give two applications of this technique. [3]

OR

Toxicity of manganese may be manifested as deficiency symptoms of iron, calcium and magnesium. Justify.

SECTION D

25. A portion of the transverse section of the root is shown in the diagram. Label 1 to 4 and also write the function of parts 1 and 4. Briefly explain the pathways 2 and 3. [5]



OR

(a) Draw a labelled diagram of the Calvin cycle.

(b) Why is the Calvin cycle named so?

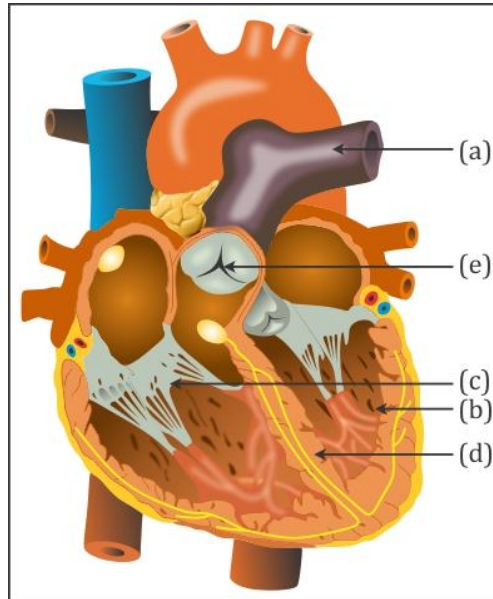
(c) Name the phases of the Calvin cycle.

26. Briefly describe the structure of the human eye. [5]

OR

The figure of the internal structure of the mammalian heart is provided. Carefully study it and answer the following questions:

- i. Name the parts labelled as a, b, c, d and e.
- ii. Give one important function of each of these parts.



27. Describe the various kinds of skeletal joints in the human body, according to their mobility, giving one example each. [5]

OR

Explain the transmission of a nerve impulse across a chemical synapse.