

CBSE SAMPLE PAPER – 15 (Unsolved)

Class-XI

BIOLOGY (THEORY)

Time: 3 Hrs

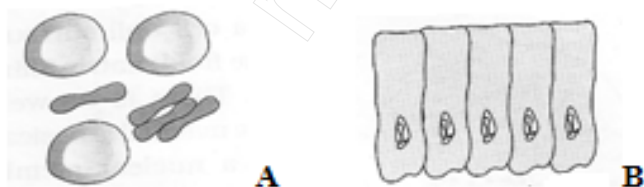
MM: 70

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. Identify the following cells and mention their position in the human body.

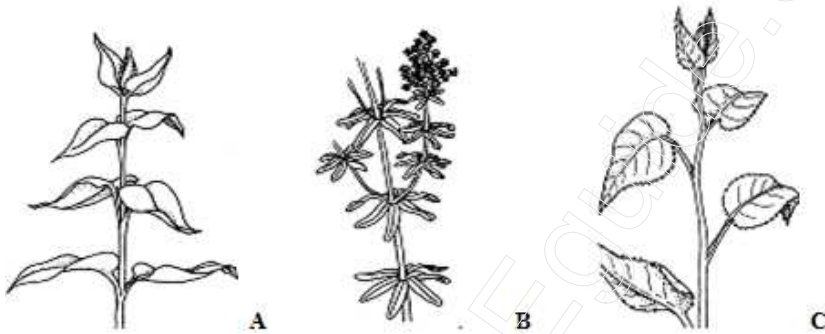


2. Prove that the RQ of a substance is only 0.7 with the help of equation.
3. Why cellulose is considered as a homopolymer?
4. Differentiate G1 and G2 of interphase.

5. To which family does indigofera and colchicines belong to? Give their economic importance.

Section – B

6. Write four functions of potassium in plants.
- 7.
- a) Name the arrangement of leaves as shown in the diagram below.
- b) Give an example for each of them.



8. State two characteristic of fungi imperfecti with two examples.

Or

What is the importance of chloroplast for our survival?

9. What is wood botanically? Differentiate hard and soft wood.

Section – C

10. Name the animal given in the diagram below. Write its phylum and describe the general features of the phylum.



11. Where glycolysis takes place in a cell? Explain its different steps.
12. Describe the fate of ammonia in plants with the help of reactions.
13. Describe each kind of connective tissues.
14.
 - a) Mention two similarities between cyanobacteria and rhodophyceae.
 - b) Give 4 differences between annelid and aschelminthes.

Or

15. Draw a labelled diagram of nephron.
16. How are coenzymes different from prosthetic group? Give an example for each.
17.
 - a) Describe any two types of phyllotaxy found in angiosperms. Give an example of each.
 - b) What are microbodies? Give two examples
18. Give four ways uses of earthworms.
19. Write the floral formula of an actinomorphic, bisexual, hypogynous flower with five united sepals, five free petals, five free stamens and two united carpels with superior ovary and axile placentation.
20. Name the most widely used compound used as a source of ethylene. List its functions in tomato, walnut and cucumber.

21. One Sunday morning Ratan and his friend emptied all the overhead tanks belonging to flat owners who were not residing in their apartments for the last few months. On their return, the owners complained about their empty tanks and created unrest in the campus. Some elderly people spoke against Ratan and his friends. Ratan humbly apologized for the inconvenience caused but explained why they had done so. The people were happy and appreciated the boys.

- a) What was the objective behind Ratan's act?
- b) What values did he promote?
- c) Explain in brief the stages of life cycle of a malarial parasite in human body.

Section – D

1. Describe the electron microscope structure of biomembrane and the two models proposed to explain them.

Or

Explain the steps in urine formation in a human kidney.

2. Draw a labelled diagram of digestive system of frog. What is the role of lymph?

Or

- a. Describe synapsis, chiasmata and bivalent with neat sketch.
- b. Give the significance of meiosis.

Section-E (OTBA) Questions

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