
CBSE SAMPLE PAPER – 07 (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. What are liverworts? Why are they so called?
2. Name the enzyme secreted by the digestive system of a man to digest proteins in acidic and alkaline medium.
3. Why slime moulds are called fungus-animals?
4. Which hormone is called immunosuppressive and a stress hormone?
5. How can the age of a tree be determined?

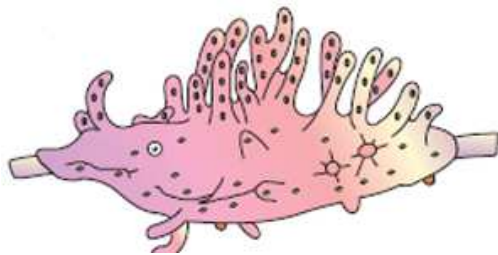
Section – B

6. Describe the functions of the plastid.
 7. Draw the erythrocytic cycle of malarial parasite in a human being.
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Or

What are chrysophytes? Give their characteristics with suitable examples.

8. Identify the following animal by giving them the zoological name and phylum. Mention two unique features of the phylum.



9. Give reason: “Krebs cycle is also known as amphibolic pathway”.

Section – C

10. What are ERV and IRV? Give various steps involves in respiration.
11. a) Give the full form of ADH and under what condition of the body does it is released?
- b) Name the gland that secretes it.
- c) What is its role in forming hypertonic urine? What is the disease caused due to the failure of its secretion?
12. Name and explain three phases of Calvin cycle. Where this cycle does takes place in a cell?
13. a) Give outline classification of chordates with example of each major group.
- b) Give two diagnostic characters of chordata.

Or

- a) Give outline classification of plant kingdom with examples of each major group.
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b) Give two diagnostic characters of gymnosperms.

14. What is synapse? Explain how nerve impulse is transmitted across a synapse?

15.

a) Describe the induced-fit hypothesis for mode of enzyme action.

b) Pepsinogen, a proteinase enzyme of stomach is an exoenzyme or an endoenzyme?

c) How sulfa drugs help in inhibition of bacterial growth?

16.

a) What is meant by biological nitrogen fixation?

b) Explain the process of biological nitrogen fixation.

c) Give the role of leghemoglobin in nitrogen fixation.

17.

a) Name the phenomenon in which the terminal bud of the plant suppresses the development of nearby lateral buds.

b) Name the phytohormone that can promote this phenomenon.

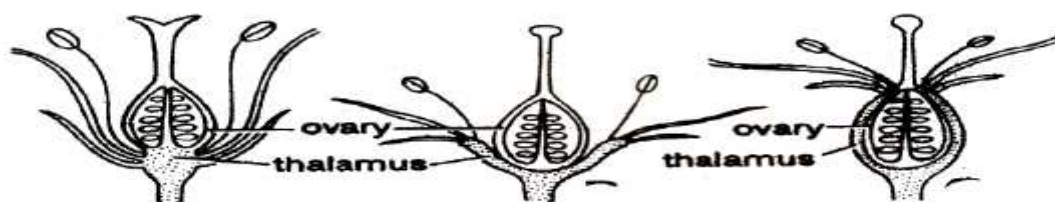
c) Name a gaseous plant hormone and mention its three different actions on plants.

18. A nerve cell releases 36 ATPs whereas a kidney cell releases 38 ATPs by complete oxidation of one gram mole of glucose. Why?

19. a) What is fungi imperfecti?

b) Outline the classification of kingdom fungi.

20. Give the names of the three forms of the thalamus in the same order as depicted in the diagram below citing an example each.



21. **Anita was happy when she gave birth to her first child. Her in- laws were dissatisfied at her not giving birth to a male child and blamed Anita. Anita tried to convince her in laws that she had no role in the child's gender. They understood the biological reason but were yet to be satisfied. Anita's husband took up the matter and convinced the parents.**

- a) What values did Anita's husband show in the above situation?
- b) What governs sex determination in humans? How is it different from birds?
- c) Why can't Anita be blamed for not giving birth to a male child?

Section - D

22.

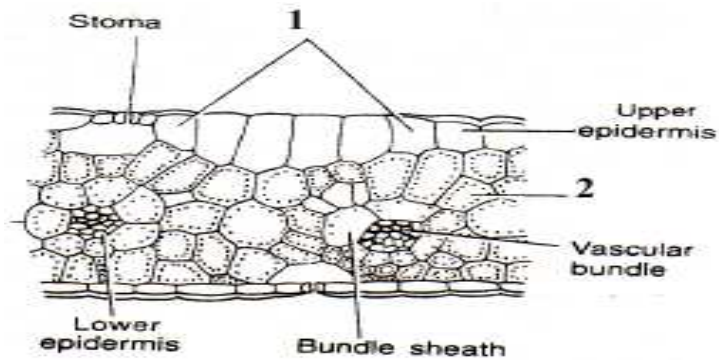
- a) Everytime fertilization occurs, the chromosome number is doubled. Yet the chromosome number of a species remains constant. Comment on it.
- b) Describe the sequence of events in meiosis I. What are the special events of homologous chromosomes during meiosis?
- c) A cell has 10 metacentric, 10 acrocentric, 10 sub-metacentric and 10 telocentric chromosomes. Calculate the number of V and I shape chromatids in anaphase of same cell.

Or

- a) When the two lamellar models could not explain the permeability of plasma membrane and passing of water through it. How was it explained by fluid mosaic model?
 - b) Give the name and draw the structure of a cell organelle that has double unit membrane.
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23.

- a) In the diagram below, identify the components marked as 1 and 2. Give one function of each of these components.



- b) Draw the T.S. of dried mammalian bone.
c) What is cork cambium? Give the name of a tissue formed by cork cambium.

Or

- a) With neat sketch, give the location and a function of
- i) Microtubules
 - ii) Ribosome
 - iii) Thylakoid
 - iv) ER
 - v) Oxisomes

Section-E (OTBA) Questions

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