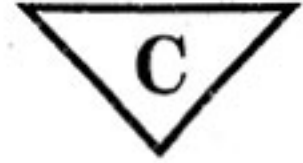


127
(TS)



Total No. of Questions - 21

Total No. of Printed Pages - 2

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No.

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Part - III
BOTANY, Paper - I
(Biological Sciences)
(English Version)

Time : 3 Hours

Max. Marks : 60

Note : Read the following instructions carefully :

- 1) Answer **all** questions of Section 'A'. Answer **any six** questions out of eight in Section 'B' and answer **any two** questions out of three in Section 'C'.
- 2) In Section 'A', questions from Sr. Nos. 1 to 10 are of "**Very Short Answer Type**". Each question carries **two** marks. Every answer may be limited to **5** lines. Answer **all** the questions at one place in the same order.
- 3) In Section 'B', questions from Sr. Nos. 11 to 18 are of "**Short Answer Type**". Each question carries **four** marks. Every answer may be limited to **20** lines.
- 4) In Section 'C', questions from Sr. Nos. 19 to 21 are of "**Long Answer Type**". Each question carries **eight** marks. Every answer may be limited to **60** lines.
- 5) Draw labelled diagrams wherever necessary for questions in Sections 'B' and 'C'.

SECTION A

10 × 2 = 20

Note : Answer **all** questions. Each answer may be limited to 5 lines.

1. Who is popularly known as father of Botany? What was the book written by him?
2. Define the terms, couplet and lead in taxonomic key.
3. State two economically important uses of heterotrophic bacteria.

4. Which part of the flower in cashew plant forms the false fruit?
5. Define mericarp. In which plant you find it?
6. Give the technical description of anthers of *Allium cepa*.
7. Give one example for each of amino acids, sugars, nucleotides and fatty acids.
8. What is middle lamella made of? What is its functional significance?
9. Which of four chromatids of a bivalent at prophase - I of meiosis can involve in cross over?
10. Define heliophytes and sciophytes.

SECTION B

6 × 4 = 24

Note : Answer **any six** questions. Each answer may be limited to 20 lines.

11. Write a note on economic importance of Algae and Bryophytes.
12. Give a brief account of dinoflagellates.
13. Write a brief account on gametogenesis with examples.
14. Describe the nonessential floral parts of plants belonging to Fabaceae.
15. Give a brief account of the types of chromosomes based on the position of centromere.
16. Describe the cell organelle which contains chlorophyll pigments.
17. State the location and function of the different types of meristems.
18. Write a brief account on the classification of xerophytes.

SECTION C

2 × 8 = 16

Note : Answer **any two** questions. Each answer may be limited to 60 lines.

19. Explain how stem is modified variously to perform different functions. (Any six modifications).
20. With a neat labelled diagram, describe the parts of a mature angiosperm embryo sac. Mention the role of synergids.
21. Describe the internal structure of a dicot root.