

BOTANY

Paper –I (First year)

Time: 3 Hours

Max. Marks: 60

SECTION –A

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

10 × 2 = 20

1. Which is the largest Botanical garden in the world? Name a few well known botanical gardens in India.
2. Who proposed five kingdom classification? How many kingdoms of this classification contain eukaryotes?
3. Name different methods of vegetative reproduction in Bryophytes.
4. Which of the following are monoecious and dioecious organisms:
 - a) Date palm
 - b) Coconut
 - c) Chara
 - d) Marchantia
5. Which are the three cells found in a pollen grain when it is shed at the three celled stage?
6. What is geocarpy? Name the plant which exhibits this phenomenon?
7. Mention a single membrane bound organelle which is rich in hydrolytic enzymes.
8. Explain the zwitterionic form of an amino acid.
9. The following events occur during various phases of the cell cycle. Fill the blanks with suitable answer against each.
 - a) Disintegration of nuclear membrane _____
 - b) Appearance of nucleolus _____
 - c) Division of centromere _____
 - d) Replication of DNA _____
10. Define population and community.

SECTION – B

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

6 × 4 = 24

11. Give a brief account of Dinoflagellates.
12. Give a brief account of prothallus.
13. Describe any two special types of inflorescences.
14. Describe the non-essential floral parts of plants belonging to Fabaceae.
15. Give an account of the types of chromosomes based on the position of centromere.

16. Mention the key features of meiosis.
17. State the location and function of different types of meristems.
18. Write a brief account on classification of xerophytes.

SECTION – C

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

2 × 8 = 16

19. Define root modifications. Explain how the root is modified to perform different functions.
20. Describe the process of Fertilization in angiosperms.
21. Describe the T.S. of a dicot stem.

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