

Reg. No .....

Name .....

24U459

**B. Sc. DEGREE END SEMESTER EXAMINATION - MARCH 2024**

**SEMESTER 4 - COMPLEMENTARY BOTANY FOR ZOOLOGY**

**COURSE : 19U4CPBOT4 - ANATOMY AND APPLIED BOTANY**

*(For Regular - 2022 Admission and Improvement / Supplementary - 2021/2020/2019 Admissions)*

Time : Three Hours

Max. Marks: 60

**PART A**

**Answer All (1 mark each)**

1. What is bulliform cell?
2. What is apposition?
3. Define dendrochronology.
4. What is lateral meristem? Provide example.
5. Explain adventive embryony.
6. Which tissue is most common in the hypodermis of monocot stem?
7. Name an auxin commonly used in tissue culture media.
8. What is plant hybridization?

**(1 x 8 = 8)**

**PART B**

**Answer any 6 (2 marks each)**

9. Explain stem and root cuttings for propagation.
10. Briefly explain the adaptations in leaves of halophytes.
11. Explain distant hybridization.
12. Differentiate hard wood and soft wood.
13. Differentiate amphicribal and amphivasal vascular bundles.
14. Explain organic nutrients used in tissue culture medium.
15. Differentiate ray and fusiform initials.
16. What are the applications of polyploidy in crop improvement?

**(2 x 6 = 12)**

**PART C**

**Answer any 4 (5 marks each)**

17. Compare stem and root using anatomical characters.
18. Explain salient anatomical features of a dicot stem.
19. Examine the composition of plant tissue culture medium.
20. Distinguish sexual and asexual modes of reproduction in flowering plants.
21. Illustrate and explain mound layering.
22. Write a comparative account of fibre and sclereids.

**(5 x 4 = 20)**

**PART D**

**Answer any 2 (10 marks each)**

23. Write an essay on the anomalous secondary thickening in Bignonia with the help of suitable labelled diagrams.
24. "Mutation breeding is a special method of plant breeding". Discuss.
25. Write an essay on the morphological and anatomical adaptations of Halophytes and Hydrophytes.
26. Discuss the significance, procedure, and achievements of plant hybridization.

**(10 x 2 = 20)**