

TB245457M

26-11

Reg. No : .....

Name : .....

**BACHELOR'S DEGREE (C.B.C.S) EXAMINATION, NOVEMBER 2024**

**2022 ADMISSIONS REGULAR**

**SEMESTER V - CORE COURSE (BOTANY )**

**BO5B08B18 - Anatomy, Reproductive Botany and Microtechnique**

**Time : 3 Hours**

**Maximum Marks : 60**

**Part A**

**I. Answer any Ten questions. Each question carries 1 mark**

**(10x1=10)**

1. What are raphides?
2. What are kino veins?
3. What are stone cells?
4. What is epiblema?
5. What are tyloses?
6. Differentiate monothealous and bithealous anthers.
7. Define palynology.
8. Discuss tetrahedral arrangement of microspores.
9. In which group of plants do you find double fertilization? What is its significance?
10. Distinguish between a squash and a smear.
11. What is acetocarmine used for?
12. What is the source of hematoxylin stain?

**Part B**

**II. Answer any Six questions. Each question carries 5 marks**

**(6x5=30)**

13. Write an account on the mechanical tissues in plants.
14. Explain the theories on the growth of cell wall.
15. Write an account on laticiferous tissues.
16. Explain the differences between dicot root and monocot root.
17. Draw and explain the structure of vascular bundle in a monocot stem.
18. With diagrams, describe the pollen germination in angiosperms.
19. Write a note on the structure of a mature embryo sac. Draw diagram.
20. Enlist the characteristic features of anemophilous flowers. Cite an example.
21. Describe the process of double staining the sections for microscopic studies.

**Part C**

**III. Answer any Two questions. Each question carries 10 marks**

**(2x10=20)**

22. Write an account on the ergastic substances in plant cells.
23. Explain anomalous secondary growth in Boerhaavia stem with diagrams.
24. With illustrations, describe the structure of a mature anther.
25. Define killing and fixing in microtechnique. Give the composition and action of any three killing and fixing reagents.