Reg. No……. Name……..

B A, B SC, B COM DEGREE END SEMESTER EXAMINATION – OCTOBER 2025

UGP (HONS.) SEMESTER - 3: DISCIPLINE SPECIFIC COURSE

COURSE: 24UBOTDSC202 - PLANT ANATOMY AND REPRODUCTIVE BIOLOGY

(For Regular 2024 Admission)

Time: 1.5 Hours Max. Marks: 50

PART A

Answer any 10 questions (1 Mark each)

1. Define cellulose fiber. (CO1; R)
2. What is the role of hemicellulose? (CO1; R)
3. What is meant by nucellus. (CO2; R)
4. Define complex tissues. (CO2; R)
5. Give one example of external secretory tissue. (CO2; R)
6. What is periderm? (CO3; R)
7. Define dendrochronology. (CO3; R)
8. What is the function of the stigma? (CO4; R)
9. Explain anther wall. (CO4; U)
10. Define microsporangium. (CO4; R)
11. What is double fertilization unique to? (CO4; R)
12. Define seed formation. (CO4; R)

(1 x 10 = 10)

PART B

Answer any 10 questions (2 Marks each)

13. Differentiate between cellulose and pectin. (CO1; U)
14. Mention two functions of plasmodesmata. (CO1; U)
15. List two differences between simple pits and bordered pits. (CO1, U)
16. Compare parenchyma and collenchyma. (CO2; U)
17. State two properties of sclerenchyma. (CO2; U)
18. Distinguish between epidermal and ground tissue system. (CO2; U)
19. Differentiate between dicot and monocot stems. (CO3; U)
20. What are growth rings? Explain their importance. (CO3; U)
21. Write short notes on tension wood. (CO3 – U)
22. State two functions of heart wood. (CO3 – U)
23. Mention two types of ovules with diagrams. (CO4; U)
24. Describe a typical monocot embryo. (CO4; U)

(2 x 10 = 20)

PART C

Answer any 4 Questions (5 Marks each)

25. Explain the ultrastructure and materials of plant cell wall. (CO1; U, An)
26. Compare primary anatomy of dicot and monocot roots. (CO3; U, An)
27. Describe anomalous secondary growth in dicot stem. (CO3; U, An)
28. Explain Microsporogenesis and Microgametogenesis with suitable diagrams. (CO4; U, An)
29. Discuss the mechanism pollination and the fertilization with double fertilization. (CO4; U, An)
30. Describe endosperm types and dicot embryo development. (CO4; U, An)

(5 x 4 = 20)