



K25U 2911

Reg. No. :

Name :

III Semester B.Sc. Degree (CBCSS – OBE – Supplementary/Improvement)
Examination, November 2025
(2019 to 2023 Admissions)
Complementary Elective Course in Botany for B.Sc. Zoology and Forestry
3C03BOT : ANGIOSPERM MORPHOLOGY, ANATOMY AND
SYSTEMATICS

Time : 3 Hours

Max. Marks : 40

Instruction : Draw diagrams only when specified.

PART – A
(Objective Type)

Answer **all** questions.**(4×1=4)**

1. Type of vascular bundle commonly found in monocot stems
a) Radial b) Bicollateral c) Concentric d) Collateral
2. In dicot plants, what is the primary difference between the vascular cambium and the cork cambium ?
a) Vascular cambium produces secondary xylem and phloem, while cork cambium produces pith cells
b) Vascular cambium forms the outer bark, while cork cambium produces wood
c) Vascular cambium gives rise to secondary vascular tissues, while cork cambium generates outer protective tissues like periderm
d) Vascular cambium produces primary vascular tissues, while cork cambium produces secondary wood
3. An example of Artificial system of classification
a) Linnaeus' System of classification
b) Engler and Prantl's classification
c) Bentham and Hooker's classification
d) Hutchinson's classification

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4. The seeds of Orchidaceae are typically
a) Large and covered in a hard seed coat
b) Tiny and dust-like, requiring fungal symbiosis for germination
c) Fleshy and buoyant for water dispersal
d) Encased in a thick pericarp and adapted for animal dispersal

PART – B
(Short Essay)

Answer **any eight** questions.**(8×2=16)**

5. Describe the characteristic inflorescence of the genus *Ficus*.
6. Explain the structure and types of pits in plant cell wall.
7. Describe the role of ergastic substances in plant cells, giving examples of reserve, secretory and by products.
8. Distinguish between latex cells and latex vessels.
9. Describe the anatomy of a monocot leaf.
10. Define dendrochronology.
11. Differentiate between collateral and bicollateral vascular bundles, with examples.
12. Briefly discuss the International Code of Botanical Nomenclature.
13. Discuss on inflorescence characters of the family Euphorbiaceae.
14. Write notes on the androecium in the family Malvaceae.
15. Mention the botanical names of two economically important plants from the family Euphorbiaceae.
16. What is the relationship between angiosperms and gymnosperms ?



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PART – C
(Essay)

Answer **any four** questions.**(4×3=12)**

17. Comment on organization of root apex, add necessary diagrams.
18. Differentiate primary and secondary cell walls in plants.
19. Classify meristems based on their position and give examples.
20. Discuss various simple tissues in plants.
21. Briefly discuss various systems of plant classification.
22. Discuss the major identifying features and evolutionary significance of the family Poaceae.

PART – D
(Long Essay)

Answer **any one** question.**(1×8=8)**

23. What are the various types of racemose and cymose inflorescence ? Describe with necessary diagrams.
24. Describe anomalous secondary growth in *Boerhaavia* with a neat and labelled diagram.
25. Describe the morphological and floral features of the family Orchidaceae and its evolutionary significance in relation to pollination mechanisms.