



K23U 3411

Reg. No. : .....

Name : .....

III Semester B.Sc. Degree (C.B.C.S.S. – O.B.E. – Regular/Supplementary/  
Improvement) Examination, November 2023  
(2019 to 2022 Admissions)  
**COMPLEMENTARY ELECTIVE COURSE IN BOTANY FOR BSC ZOOLOGY  
AND FORESTRY**  
**3C03 BOT : Angiosperm Morphology, Anatomy and Systematics**

Time : 3 Hours

Max. Marks : 40

*Instruction : Draw diagram whenever specified.*

PART – A  
(Objective Type questions)

Answer all :

(4×1=4)

- Wavy leaf margin is characteristic of
  - Annonaceae
  - Apocynaceae
  - Rubiaceae
  - Solanaceae
- Positional arrangement of petals and sepals within a flower bud is called
  - Symmetry
  - Phyllotaxy
  - Aggregation
  - Aestivation
- Which among the following is a characteristic feature of Malvaceae ?
  - Reniform anthers
  - Sagittae anthers
  - Swollen placenta
  - Dumbbell stigma
- Secondary xylem vessels become blocked due to
  - Plasmodesmata
  - Callose plugs
  - Tyloses
  - Ergastic substances

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PART – B  
(Short essay questions)

Answer any eight :

(8×2=16)

- Compare the functions of sclerenchyma and collenchyma.
- Classify meristems based on their position in the plant body.
- Explain the floral characteristics of Papilionoidiae.
- Give a brief account of the significance of herbaria in taxonomic studies.
- What are nectaries ?
- What is a concentric vascular bundle ? Analyse its types.
- Give an account of the economic importance of Solanaceae.
- Analyse the advanced floral features of Asteraceae.
- How is the primary stelar structure of dicot root different from that of dicot stem ?
- Differentiate between heart wood and sapwood.
- Comment on the evolutionary significance of thickening patterns in xylem vessels.
- List out any four key characters of Rubiaceae.

PART – C  
(Essay questions)

Answer any four :

(4×3=12)

- Critically analyse the advanced features of the family Poaceae.
- Describe the pattern of secondary growth in the dicot roots.



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- Justify the statement 'flower is a modified shoot'.
- Why is phloem called as a complex tissue ?
- Analyse the anomalous behaviour of vascular cambium in *Boerhaavia*.
- Describe the salient features of Orchidaceae.

PART – D  
(Long essay questions)

Answer any one :

(1×8=8)

- Describe the features of Bentham and Hookers system of classification. Discuss its merits and demerits.
- Describe the types of ergastic substances found in angiosperms.
- Give a detailed account of different types of inflorescences found in angiosperms with examples.