

K23P 0458

Reg. No. :

Name :

II Semester M.Sc. Degree (C.B.S.S. – Reg./Supple./Imp.)
Examination, April 2023
(2019 Admission Onwards)
BOTANY
BOT2C06 : Plant Anatomy and Microtechnique

Time : 3 Hours

Max. Marks : 60

I. Answer **any two** of the following. (2×8=16)

- 1) Give an account of different types of secretory tissues in plants with suitable diagrams.

OR

- 2) Bring out the different nodal patterns in angiosperms and add a note on their phylogenetic significance.
- 3) Explain the purposes of killing and fixing of tissues in microtechnique and add notes on commonly used killing and fixing reagents employed in microtechnique.

OR

- 4) Write a note on the principles of staining. Elaborate on the techniques and classification of stains.

II. Answer **any two** of the following.

(2×6=12)

- 5) a) What are trichomes ? 1
b) Classify trichomes. 2
c) Draw diagrams of different types of trichomes. 3
- 6) a) What do you mean by root stem transition ? 1
b) Explain root stem transition in *Medicago sativa*. 2
c) Bring out the significance of root stem transition in Angiosperms. 3
- 7) a) What is micrometry ? 1
b) Explain the applications of micrometry. 2
c) Bring out the working model or flow chart of micrometry. 3

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III. Answer **any six** of the following.

(6×3=18)

- 8) Write notes on Korper- Kappe theory.
- 9) Write notes on the purpose of canada balsam in microtechnique.
- 10) Comment on the applications of vital stains.
- 11) Bring out the classification of microscopes.
- 12) Differentiate Carnoy's fluid from Rawlin's formula.
- 13) What are bulliform cells ? What is its role in plants?
- 14) Differentiate sap wood from heart wood.
- 15) Explain the commercial uses of barks.

IV. Answer **any seven** of the following.

(7×2=14)

- 16) Explain the advantages of pneumatophores to plants possessing them.
- 17) What are the constituents of periderm in plants ?
- 18) What is sieve plate ? What is its function ?
- 19) Comment on Idioblasts.
- 20) Bring out the importance of Plastochrone index.
- 21) Comment on the use of Navaschins formula.
- 22) Bring out any two applications of Phase contrast microscope.
- 23) What are clearing agents ? Give one example.
- 24) Comment on DPX and its purpose.
- 25) Elaborate on the anatomy of seed coat.