



K20P 0303

Reg. No. :

Name :

**II Semester M.Sc. Degree (CBSS-Reg./Suppl./Imp.) Examination, April 2020
(2014 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 cambium in terms of polarity, cell types and seasonal activity.

OR

- 2) Explain sieve element differentiation.
3) Write on the fixatives used for different plant materials. Add a note on techniques of fixing.

OR

- 4) Give an account of classification stains. Add a note on commonly used basic stains.

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

(2×6=12)

- 5) a) What is quiescent centre ? 1
b) Write on the origin of lateral roots. 2
c) Give the structure of modified leaves. 3
6) a) What is a whole mount ? 1
b) Write on the preparation of maceration slides. 2
c) Give the methods for staining proteins and carbohydrates. 3
7) a) What is heart wood ? 1
b) Write on the types and functions of trichomes. 2
c) Give an account of types of epidermal cells. 3

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

(6×3=18)

- 8) Root-stem transition
- 9) Valamen roots
- 10) Plastrochrone index
- 11) Secondary wall thickening
- 12) Phase contrast microscope
- 13) Methods of double staining
- 14) Dehydrating agents
- 15) Trichomes.

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

(7×2=14)

- 16) Pneumatophores
- 17) Trilaccenar nodes
- 18) Cambium in wound healing
- 19) Bidirectional activity of cambium
- 20) Sieve plate
- 21) Compression wood
- 22) Canada balsam
- 23) Bulliform cells
- 24) Carnoy's fluid
- 25) Microtome
- 26) Digestive glands.