



K24P 0834

Reg. No. :

Name :

**Second Semester M.Sc. Degree (C.B.S.S. – Supple. (One Time Mercy
Chance)/Imp.) Examination, April 2024
(2014 to 2022 Admissions)
BOTANY**

BOT2 C 05 – Embryology, Palynology and Plant Breeding

Time : 3 Hours

Max. Marks : 60

- I. Answer **any two** of the following : **(2×8=16)**
- 1) What is terminator seed technology ? Explain its process. Mention its advantages and disadvantages.
 - OR
 - 2) Comment on the centers of origin of cultivated crops.
 - 3) What is apomixis ? Explain in detail about the two main categories of apomixis. Add a note on its practical importance.
 - OR
 - 4) Describe the different types of embryo sac development in plants.
- II. Answer **any two** of the following : **(2×6=12)**
- 5) Explain the various mechanism of pollination. Add a note on vectors involved.
 - 6) Differentiate between nuclear, cellular and helobial endosperm and add a note on cereal endosperm.
 - 7) Explain the applications of pollen morphology. Add a note on palynology in relation to taxonomy.
- III. Answer **any six** of the following : **(6×3=18)**
- 8) Explain campylotropous, amphitropous and circinotropous types of ovule.
 - 9) Describe the structure of anther wall layers.
 - 10) Comment on the significance of pollen pistil interaction.
 - 11) Explain the floral mechanisms favouring cross pollination.
 - 12) What are the advantages of parthenocarpy ?
 - 13) Write a note on melissopalynology.
 - 14) Explain the various methods of breeding for disease resistance in plants.
 - 15) Describe the approaches for germplasm conservation of plant genetic materials.

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

(7×2=14)

- 16) Write a note on filiform apparatus.
- 17) List the functions of pollen kit.
- 18) Explain xenia and metaxenia.
- 19) What is pollen allergy ?
- 20) Comment on pollen aperture.
- 21) Mention the contributions of P. K. K. Nair.
- 22) Mention the achievements of mutation breeding.
- 23) Name any two plant breeding institutes in India.
- 24) Enlist the nutritive value of honey.
- 25) What is seed certification?

