K23P 0457

Reg. No. : .....

Name : .....

II Semester M.Sc. Degree (CBSS – Reg./Supple./Imp.)
Examination, April 2023
(2019 Admission Onwards)
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 endosperm ? Explain its various types. Add a note on ruminate endosperm.

OR

2) What is apomixis ? Explain in detail about the two main categories of apomixis. Add a note on its practical importance.

3) Explain the various methods of breeding for disease and pest resistance in plants.

OR

4) Comment on the centers of origin of cultivated crops.

II. Answer **any two** of the following. **(2×6=12)**

5) Explain the four categories of polyembryony based on the origin of additional embryos.

6) Describe the structure of a mature angiosperm ovule. Mention the different types of ovules.

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) Comment on the significance of pollen pistil interactions.

9) Describe the structure of anther wall layers.

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10) Comment on melissopalynology.
11) Explain the floral mechanisms favouring cross pollination.
12) What are the advantages of parthenocarpy ?
13) Describe the structure of pollen wall.
14) Explain the process of terminator seed technology.
15) Explain the approaches for germ plasm conservation of plant genetic materials.

IV. Answer **any seven** of the following. **(7×2=14)**

16) Mention the different types of microspore arrangements in pollen tetrads.
17) List the functions of tapetum.
18) What are antipodals ?
19) What is pollen allergy ?
20) Comment on agents of pollination.
21) Write a note on obturator.
22) Mention the achievements of mutation breeding.
23) What are genetically modified crops ? Give an example.
24) Enlist the nutrient contents in honey.
25) What is plant quarantine ?