



K20P 0302

Reg. No. :

Name :

**II Semester M.Sc. Degree (CBSS – Reg./Suppl./Imp.) Examination, April 2020
(2014 Admission Onwards)**

BOTANY

BOT2C 05 : Embryology, Palynology and Plant Breeding

Time : 3 Hours

Max. Marks : 60

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

(2×8=16)

- 1) Explain in detail microsporogenesis and pollen development in angiosperms.

OR

- 2) Explain the classification and practical value of polyembryony.
3) Give an account of centres of origin and diversity of crop plants.

OR

- 4) Write an account of major crops and their hybrids cultivated in Kerala.

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

(2×6=12)

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| 5) a) Exine proteins. | 1 |
| b) Evolution of pollen types. | 2 |
| c) Establishment of symmetry in plants. | 3 |
| 6) a) Define parthenocarpy. | 1 |
| b) Polygonum type of embryo sac. | 2 |
| c) Adaptation of pollen grains. | 3 |
| 7) a) Define Apomixis. | 1 |
| b) Storage metabolites of endosperm. | 2 |
| c) Variety release procedure. | 3 |

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

(6×3=18)

- 8) Process of megasporogenesis.
- 9) Nutrition of embryo sac.
- 10) Post fertilization changes.
- 11) Biochemical changes during fruit maturation.
- 12) Recent advances in palynological studies.
- 13) Types of germplasm collection.
- 14) Breeding for disease resistance.
- 15) What are farmer rights ?

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

(7×2=14)

- 16) Amoeboid tapetum
 - 17) Filiform apparatus
 - 18) Cleavage polyembryony
 - 19) Pollen recognition
 - 20) Solid style
 - 21) Pollen kitt
 - 22) Helobial endosperm
 - 23) Hybrids
 - 24) NGO's
 - 25) Genetics of resistance.
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