

**FOURTH SEMESTER EXAMINATION 2021-22****M.Sc. BOTANY****Paper - I****Embryology & Plants Resources**

Time : 3.00 Hrs.

Max. Marks : 80

Total No. of Printed Page : 03

Mini. Marks : 29

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**Note:-** Question paper is divided into three sections. Attempt question of all three section as per direction Distribution of marks is given in each section.

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**Section 'A'****Objective type questions.**

Q.1 Attempt any six questions from the following :

6x2=12

(i) Filiform apparatus is found in :

- |                  |                      |
|------------------|----------------------|
| a. egg apparatus | b. synergids         |
| c. Pollen        | d. None of the above |

(ii) Male gametes of angiosperms are :

- |                    |                      |
|--------------------|----------------------|
| a. uniflagellate   | b. biflagellate      |
| c. multiflagellate | d. None of the above |

(iii) Polygonum type of embryo sac is :

- |                |                      |
|----------------|----------------------|
| a. monosporic  | b. bisporic          |
| c. tetrasporic | d. none of the above |

(iv) Production of gametophytes directly from the diploid cells of the sporophyte without spore formation is :

- |               |                      |
|---------------|----------------------|
| a. apogamy    | b. apospory          |
| c. diplospory | d. None of the above |

(2)

- (v) Gametophytic self incompatibility is determined by :
- a. genotype of pollen
  - b. Phenotype of pollen
  - c. out brading
  - d. none of the above
- (vi) Part of the embryonal axis which develops below cotyledons in a dicot embryo is:
- a. hypocotyl
  - b. epicotyl
  - c. mesocotyl
  - d. radical
- (vii) Parthenocarpy is :
- a. sud formation without fruit development.
  - b. fruit formatin without fertilization
  - c. Seed formation without pollination
  - d. none of the above
- (viii) Canola and flax are :
- a. oil yielding crops
  - b. cereals
  - c. fiber yielding crops
  - d. none of the above
- (ix) Pattans are :
- a. Cultivated crops
  - b. NWFPs
  - c. Cereals
  - d. None of the above
- (x) Radio protective activity in found in :
- a. Ageratum conyzoides
  - b. Dianthus chinensis
  - c. Euphorbia microphylla
  - d. Chenopodium album

## Section 'B'

### Short answer type question (in 200 words)

Q.1 Attempt any four questions from the following :

4x5=20

- (i) Write a note on hybrid seed production.
- (ii) What is double fertilization and triple fusion.

(3)

- (iii) What is in vitro fertilization.
- (iv) Write a note on embryo culture.
- (v) Describe vegetable oil yielding crops.
- (vi) Write a note on Pollen allergy.
- (vii) Write a note on resins.

### Section 'C'

**Long answer/Essay type question.**

**4x12=48**

Q.3 Attempt any four questions from the following questions :

- (i) Define microsporogenesis and development of microspore.
- (ii) What do you know about tetrasporic type of embryo sac.
- (iii) Give a detail account of bamboos.
- (iv) Give an account of pollen stigma interaction.
- (v) Explain embryogenesis in plants.
- (vi) Give a detail account of dye yielding plants.
- (vii) Write a short essay on medicinal plants.

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