QP Code: RM22MSC125 Reg. No | | | | | | | | | | | AY 22

# GIET UNIVERSITY, GUNUPUR – 765022

M. Sc. (Fourth Semester) Examinations, May – 2024

## Plant Anatomy and Embryology

(Plant Science)

Time: 3 hrs Maximum: 70 Marks

**(The figures in the right hand margin indicate marks.)**

**PART – A** **(2 x 10 =20 Marks)**

| Q.1. Answer ALL Questions | CO # | Blooms Level |
|---|---|---|
| a. What do you mean by intercalary meristem? | CO 1 | K1 |
| b. Define libriform wood fibres. | CO 1 | K1 |
| c. What is sapwood? | CO 1 | K2 |
| d. What do you mean by web in mechanical tissue? | CO 2 | K2 |
| e. Define subsidiary cell. | CO 2 | K2 |
| f. Define endothecium. | CO 3 | K1 |
| g. Define circinotropous ovule. | CO 3 | K1 |
| h. What is an endospermic seed**?** | CO 4 | K1 |
| i. Define proembryo. | CO 4 | K2 |
| j. Illustrate on double fertilization. | CO 4 | K2 |

**PART – B** **(10 x 5 = 50 Marks)**

| Answer ***ANY FIVE*** the questions | Marks | CO | Blooms Level |
|---|---|---|---|
| 2. a. Give an account of Tunica-Corpus Theory. | 6 | CO1 | K2 |
| b. Write on formation of cambium ring in dicot stem. | 4 | CO1 | K1 |
| 3.a. Give an account of mechanical tissues found in plants. | 6 | CO1 | K3 |
| b. Write on physiological importance of trichomes. | 4 | CO1 | K2 |
| 4. a. Explain the phyllotaxy in leaves. | 6 | CO2 | K3 |
| b. What are the significances of secondary growth? | 4 | CO2 | K1 |
| 5.a. Describe the organisation of Root Apical Meristem (RAM). | 6 | CO2 | K2 |
| b. Describe the structure of stomata. | 4 | CO2 | K2 |
| 6. a. Write in detail on haustorial behaviour of embryo sac. | 6 | CO3 | K2 |
| b. Describe the structure of mature Embryo sac. | 4 | CO3 | K1 |
| 7.a. Write on microsporogenesis in plant. | 6 | CO3 | K3 |
| b. Illustrate on nutrition of embryo. | 4 | CO4 | K2 |
| 8. a. Discuss on embryogeny in monocotyledons. | 6 | CO4 | K3 |
| b. Write on cytology of endosperm. | 4 | CO4 | K2 |

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