647510 **MSC3BotC315x** **Seat No :_____**

M.Sc. (Botany) Semester - 3 (*CBCS*) Examination
Oct/Nov-2022 (NEW COURSE)
Plant Anatomy, Embryology & Histological Techniques (Core (New))

Time: 2:30 Hours **Marks: 70**

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate marks.

SECTION - I

Q.1 Write short note on
(a) Describe RAM in detail with all the theories. (07)
(b) Write a note on "Secondary growth in di-cotyledons" (07)

OR

Q.1 What is Nodal Anatomy? State different Nodal types. (14)

Q.2 Answer the following
(a) Describe ABC model for flowering (07)
(b) Explain types of pollination with suitable examples (07)

OR

Q.2 Define word Embryo sac and describe different types of embryo sac development. (14)

Q.3 Answer the following (any seven) (07)

1. Write the name of vascular bundles present in plants.
2. Explain – Root architect
3. If male plant 8n and female plant 12n than what are genetic formation found in Zygote and Endosperm?
4. What is polyembryony?
5. What is the role of endosperm?
6. Which are the controlling factors of flowering
7. What is sexual incompatibility in plant
8. Define the term : Gametophytes

SECTION - II

Q.1 Explain Ca++ dependent homophillic and non-homophillic cell-cell adhesion (14)

OR

Q.1 Write short notes on
(a) Apomixis (07)
(b) Uniports, symports and antiports (07)

Q.2 Describe the process of killing, fixing and sectioning for permanent stained preparation (14)

OR

Q.2 Write short note on:
(a) Mounting for temporary preparation (07)
(b) Unstained preparation for live cells (07)

Q.3 Answer the following (any seven) (07)

1. Define the term 'diffusion'
2. Give two difference between active and passive transport
3. Define : embryology in relation to taxonomy
4. Explain – whole mounts
5. State the function of IF and associated proteins?
6. What is different between actin and myosin
7. What are insoluble polysaccharides?
8. Give any two factors affecting on Diffusion

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