

502/Bot (N)

UG/5th Sem/BOT-MJ-CC-T-7/25

U.G. 5th Semester Examination - 2025

BOTANY

[MAJOR-VII]

Course Code : BOT-MJ-CC-T-7

(Reproductive Biology of Plants)

[NEP-2020]

Full Marks : 40

Time : $2\frac{1}{2}$ Hours

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

1. Answer any five questions from the following:

2×5=10

- a) Define *floral induction* and mention one factor that influences it.
- b) What is a Male Germ Unit (MGU)?
- c) Define pseudomonads and polyads with examples.
- d) What is pollen viability?
- e) Name two special structures associated with the ovule and state one function of each.
- f) What is meant by "Apomixis"?

[Turn Over]

g) Distinguish between gametophytic self-incompatibility (GSI) and sporophytic self-incompatibility (SSI).

h) Define polyembryony and give one example.

2. Answer any **two** questions from the following:

5×2=10

a) Explain the ABC model of floral organ identity with suitable diagram.

b) Write the differences between dicot and monocot embryo development.

c) Explain the mechanism of seed dispersal with examples.

d) Write short notes on: $2\frac{1}{2}+2\frac{1}{2}$

i) Doble fertilization

ii) Causes of polyembryony

3. Answer any **two** questions from the following:

10×2=20

a) Describe microsporogenesis and microgametogenesis process with suitable diagram.

b) What are the different types of endosperms? Describe the endosperms haustoria found in different angiosperms with suitable diagram.

2+8

c) Discuss the ultrastructure and organization of the mature embryo sac. Explain the functions of each component of the female gametophyte.

4+6

d) Write the differences between autogamy and allogamy. Describe in brief the factors responsible for cross-pollination.

4+6