



**2022/TDC/ODD/SEM/
BOTHCC-501T/143**

TDC (CBCS) Odd Semester Exam., 2022

BOTANY

(Honours)

(5th Semester)

Course No. : BOTHCC-501T

(Reproductive Biology of Angiosperms)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

UNIT—I

1. Answer any *two* of the following : 2×2=4

(a) Write about the book *Introduction to the Embryology of Angiospermy* by P. Maheshwari.

(b) Give an account of the books edited/ authored by B. M. Johri on higher plants embryology.

(c) Give a brief account of the significant findings of B. M. Johri in the field of Angiosperm Embryology.



(2)

2. Answer any one question : 6

- (a) Give an illustrated account of the applied aspects of Angiosperm Embryology.
- (b) Write brief notes on the important contributions of G. B. Amici, S. G. Nawasehin and W. Hofmeister in the field of Plant Embryology. $2 \times 3 = 6$

UNIT—II

3. Answer any two of the following : $2 \times 2 = 4$

- (a) With suitable examples, justify that the receptacle of flower is in fact an axis bearing floral appendage.
- (b) Draw and describe the ultrastructure of pollen wall.
- (c) Write a note on pollinia.

4. Answer any one of the following : 6

- (a) Describe the process of microgametogenesis along with necessary diagrams.
- (b) Give a brief account of the scope of palynology.

(3)

UNIT—III

5. Answer any two of the following : $2 \times 2 = 4$

- (a) Write a note on cleistogamy.
- (b) Describe the structure of orthotropous ovule.
- (c) Write a note on double fertilization.

6. Answer any one of the following : 6

- (a) Describe the types of tetrasporic embryo sac's development.
- (b) Give an illustrated account of the structure of mature ovule along with neat labelled diagram.

UNIT—IV

7. Answer any two of the following : $2 \times 2 = 4$

- (a) What is self-incompatibility?
- (b) Write a note on pellicle.
- (c) What are GSI and SSI?

8. Answer any one of the following : 6

- (a) Describe the genetic basis of self-incompatibility.



(4)

- (b) What are cybrids? Describe the method of cybrid production.

UNIT—V

9. Answer any *two* of the following : $2 \times 2 = 4$

- (a) Write a note on nuclear endosperm.
- (b) State briefly the seed dispersal mechanism in the members of the family Asteraceae.
- (c) What are Xenia and Metaxenia?

10. Answer any *one* of the following : 6

- (a) Describe the crucifer or ornagrad type of embryo development.
- (b) What is polyembryony? What are the different types of polyembryony? Describe the method of experimental (Artificial) induction of polyembryony. State the practical value of polyembryony. $1+2+2+1=6$

★ ★ ★