



**2020/TDC(CBCS)/ODD/SEM/
BOTHCC-501T/143**

TDC (CBCS) Odd Semester Exam., 2020
held in March, 2021

BOTANY

(5th Semester)

Course No. : BOTHCC-501T

(Reproductive Biology of Angiosperm)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

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

SECTION--A

1. Answer any ten questions : $2 \times 10 = 20$

(a) Write in brief on the scope of studying plant embryology.

(b) What do you mean by NPC system?

(c) Write on the major contribution of S. G. Nawaschin.



(2)

- (d) Write in brief the structure and functions of anther.
- (e) What is tapetum? State its function.
- (f) Define pollinia. What is the difference between viable and non-viable pollens?
- (g) What is double fertilization?
- (h) Draw an embryo sac (tetrasporic) with example.
- (i) Write a note on the structure of anther wall.
- (j) What is parasexual hybridization?
- (k) Write a short note on embryo development in *Paeonia*.
- (l) What is the difference between hybrid and cybrid?
- (m) What do you mean by GST?
- (n) What is self-incompatibility?
- (o) Write the role of filiform apparatus.
- (p) What is endosperm?
- (q) What do you mean by aril?
- (r) Why are seeds dispersed?
- (s) Describe the structure of a dicotyledonous seed.
- (t) What is *in vitro* pollination?

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(Continued)

(3)

SECTION—B

Answer any five questions

2. Write brief notes on the contributions of
(a) E. Strasburger and (b) W. Hofmeister. 3+3=6
3. Give an account of the contribution of P. Maheswari in plant embryology. 6
4. "Flower as a modified determinate shoot." Justify. 6
5. What do you mean by pollination? Discuss the types of pollination. Mention the adaptive features of cross-pollinated plants. 1+2+3=6
6. Draw and describe the polygonum type of embryo sac development. 2+4=6
7. Describe in detail the process of microsporogenesis. 6
8. What is embryo? Describe the development of a typical dicotyledonous embryo. 1+5=6
9. Write notes on polyembryony and apomixis. 3+3=6

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(Turn Over)



((4))

10. Give an account on the methods to overcome self-incompatibility. 3+3=6

11. Write notes on cybrids and *in vitro* fertilization. 3+3=6

3. Give an account on the contribution of P. Maheswari in plant embryology. 6

4. "Flower as a modified determinate shoot." Justify. 6

5. What do you mean by pollination? Discuss the types of pollination. Mention the adaptive features of cross-pollinated plants. 1+2+3=6

6. Draw and describe the polygonum type of embryo sac development. 2+4=6

7. Describe in detail the process of microsporogenesis. 6

8. What is embryo? Describe the development of a typical dicotyledonous embryo. 1+5=6

9. Write notes on polyembryony and apomixis. 3+3=6