



**2022/TDC (CBCS)/EVEN/SEM/
BOTHCC-602T/279**

TDC (CBCS) Even Semester Exam., 2022

BOTANY

(Honours)

(6th Semester)

Course No. : BOTHCC-602T

(Plant Biotechnology)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

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

SECTION—A

Answer any *ten* of the following questions : $2 \times 10 = 20$

1. What is somatic embryogenesis?
2. What is totipotency?
3. Write any four applications of tissue culture.
4. What is pBR322 ?



(2)

5. What do you mean by Ti-plasmid?
6. What is cloning vector?
7. What is colony hybridization?
8. What is genomic library?
9. What do you mean by gene construct?
10. What is electroporation?
11. Define selectable marker.
12. What is microprojectile bombardment?
13. What do you mean by Golden Rice?
14. What is edible vaccine?
15. What are transgenic crops?

SECTION—B

Answer any *five* of the following questions : 6×5=30

16. Give an account of plant tissue culture, media composition, citing an example.
17. Write a note on Protoplast isolation, culture and fusion.

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(Continued)

(3)

18. Give an account on restriction endonucleases with their biological role and applications in recombinant DNA technology.
19. Give an account on Tumor-inducing plasmid in plants. Give example.
20. Give an account on PCR-mediated gene cloning.
21. Write notes on the following :
 - (a) Bacterial transformation
 - (b) cDNA library
22. Give an account on agrobacterium-mediated gene transfer.
23. Describe selection of transgenics with reference to reporter genes.
24. Write notes on the following :
 - (a) Humulin
 - (b) Biosafety concerns
25. Write an account on role of transgenics in bioremediation.

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