

2022
B.A./B.Sc.
Sixth Semester
CORE – 14
BOTANY
Course Code: BOC 6.21
(Plant Biotechnology)

Total Mark: 70
Time: 3 hours

Pass Mark: 28

Answer five questions, taking one from each unit.

UNIT-I

1. Give an account of the following: 7×2=14
 - (a) Totipotency in culture
 - (b) Application of plant tissue culture in forestry

2. Give a general account of the importance of: 7×2=14
 - (a) Organogenesis
 - (b) Artificial seeds

UNIT-II

3. Describe pBR22 vector assisted by diagrams. 14

4. Write notes on the following: 7×2=14
 - (a) Classes of restriction enzymes
 - (b) YAC

UNIT-III

5. Describe the construction of a cDNA library? 14

6. (a) Write a note on blue-white screening. 7
(b) Find the TM of the given sequence 7
5'CAGTACTGTACAATCAAGAGC3'

UNIT-IV

7. Describe Ti plasmid. 14
8. Write notes on the following: 7×2=14
(a) Microinjection
(b) Reporter genes

UNIT-V

9. Discuss the role of transgenics in bioremediation with a suitable example. 14
10. Discuss the biosafety concerns in the application of biotechnology in our day-today life. 14
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