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TM243366C

Reg. No :

Name :

MASTER'S DEGREE (C.S.S) EXAMINATION, NOVEMBER 2024
2020, 2021, 2022 ADMISSIONS SUPPLEMENTARY
SEMESTER III - CORE COURSE BOTANY
BO3C10TM20 - Biotechnology, Bioinformatics and Bio- Nanotechnology

Time : 3 Hours

Maximum Weight : 30

Part A

I. Answer any Eight questions. Each question carries 1 weight

(8x1=8)

1. Define bio polymers with an example.
2. Discuss about vectors
3. Distinguish between organ culture and callus culture.
4. What is electroporation? Explain.
5. Define patent. Write any one issues related to patenting of living organisms and other bio resources.
6. Explain the importance of Agrobacterium in plant transformation.
7. Distinguish between Real time and RT PCR.
8. Describe Taq polymerase and its significance.
9. Differentiate cladogram and phylogram.
10. What are the merits and demerits of carbon nanoparticles?

Part B

II. Answer any Six questions. Each question carries 2 weight

(6x2=12)

11. Write the applications and steps involved in the production of single cell protein.
12. Briefly explain the mode of operation of a bio process.
13. What are the methods adopted for sterilization of explants?
14. How are transformed cells screened after cloning experiments?
15. Discuss the steps involved in Polymerase chain reaction. List its applications.
16. Discuss molecular phylogeny and its significance.
17. Explain the dot plot method of sequence alignment.
18. Write a note on the effect of nanoparticles on germination and seedling emergence.

Part C

III. Answer any Two questions. Each question carries 5 weight

(2x5=10)

19. Discuss, in detail, the types of media and the constituents required for an ideal tissue culture medium.
20. With illustrations, describe the steps involved in rDNA technology.
21. Outline the procedures of blotting techniques that you have studied and list out its applications.
22. Write an account on the primary nucleotide sequence databases.

