

TM244344J

Reg. No :

Name :

MASTER'S DEGREE (C.S.S) EXAMINATION, MARCH 2024

2022 ADMISSIONS REGULAR

SEMESTER IV - BOTANY

BO4E03TM20 - Genomics, Transcriptomics, Proteomics and Bioinformatics

Time : 3 Hours

Maximum Weight : 30

Part A

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

(8x1=8)

1. Write short note on biochemical markers.
2. What is RFLP?
3. What is meant by Illumina sequencing?
4. Write short note on pyrosequencing.
5. Define genome annotation.
6. Explain the steps involved in proteomics research.
7. What are scoring matrices?
8. What is ORF search?
9. What are the ethical issues with public availability of sequence data?
10. Explain the legal criteria for patenting DNA.

Part B

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

(6x2=12)

11. Write an elaborate note on physical mapping.
12. Explain the important findings in Rice genome project.
13. Explain Genome annotation in detail.
14. Briefly explain the applications of transcriptomics.
15. Explain and depict the monophyletic, paraphyletic and polyphyletic clades in a phylogenetic tree.
16. Describe the different terminologies in phylogenetic tree drawing. What are the steps in tree drawing?
17. What are the different types of databases based on data storage pattern?
18. Write an account on the applications of bioinformatics in evolutionary studies.

Part C

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

(2x5=10)

19. Write a detailed essay on genetic mapping.
20. What is meant by genome sequencing? Explain shot gun sequencing and its various approaches.
21. Write an explanatory note on the applications of comparative genomics.
22. Write an account on drug discovery.

