



QP CODE: 26019203



Reg No :

Name :

M.Sc DEGREE (CSS) EXAMINATION, MARCH 2026

Fourth Semester

M Sc BOTANY

**ELECTIVE - BY800403 - GENOMICS, TRANSCRIPTOMICS, PROTEOMICS AND
BIOINFORMATICS**

2019 Admission Onwards

C3F1B727

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. In a test cross, if the recombination frequency is very low, what does it indicate?
2. Explain RAPD.
3. Briefly explain STS mapping.
4. Discuss the significance of sequencing E.coli during the Human genome project.
5. Compare orthologs and paralogs.
6. Define protein chips.
7. Explain the different types of databases.
8. What is PROSITE?
9. What is Clustal? Identify its different versions.
10. Explain the term ADMET in drug designing.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. Explain cytogenetic mapping, its types and significance in genomics.





12. Describe the procedure of 454 sequencing.
13. Briefly discuss the computer based methods of functional annotation.
14. What is the significance of RNA sequencing?
15. Distinguish between BLAST and FASTA, Mention their different versions.
16. Write a note on RNA secondary structure prediction.
17. Highlight the significance of molecular phylogeny.
18. What is meant by transgenics? What are the major problems associated with patenting of transgenic organisms?

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. Comment on the role of markers in genetic mapping and the various types used.
20. Explain the genome sequence strategies based on conventional methods.
21. Write an essay on the significance of proteomics.
22. Briefly discuss the different methods used for the protein structure prediction.

(2×5=10 weightage)

