

QP CODE: 26019525



26019525

Reg No :

Name :

M.Sc DEGREE (CSS) EXAMINATION, MARCH 2026

Fourth Semester

M Sc BIOTECHNOLOGY

ELECTIVE - BT850403 - GENOMICS: TECHNIQUES AND APPLICATIONS

2019 Admission Onwards

E65286D3

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. Differentiate between asymmetric and symmetric karyotype .
2. How genome signature is different from genome mapping.
3. What is mitochondrial Eve?
4. Define OMIM.
5. Define EGA.
6. Define Spliceman tool .
7. Recall the challenges of gene therapy.
8. Enlist some examples of nucleic acid drugs .
9. What is meant by Xenobiology?
10. Recall about Human artificial chromosomes.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Discuss the methods for gene regulation studies .
12. Briefly describe the disorders associated with Line 1 sequence .
13. Discuss the gene structure prediction software GENSCAN and ORF .
14. Explain the applications of microarray.





15. Mention what is pharmacogenomics.
16. Enlist about advanced tools used in molecular medicine.
17. Recall the working of BioBriks.
18. Describe about TALEN system.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. What is Linkage mapping?. Explain its type and purposes.
20. Explain various mitochondrial gene deletion related syndrome.
21. Give a detailed account on the techniques used in functional genomics study.
22. Describe the mechanism of CRISPR system with its application.

(2×5=10 weightage)

