

QP CODE: 25047257



Reg No :

Name :

M.Sc DEGREE (CSS) EXAMINATION, NOVEMBER 2025

Third Semester

M Sc BIOINFORMATICS

**Core Course - BT010304 - ADVANCED BIOINFORMATICS & LINUX OPERATING
SYSTEM**

2019 ADMISSION ONWARDS

7D57CB5E

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. Differentiate between minisatellites and microsatellites.
2. How PHI-BLAST is useful in identifying patterns?
3. Define Markov assumption.
4. What is hidden in a Hidden Markov Model?
5. What do you mean by machine learning?
6. What is semi-supervised learning?
7. What is Open Source Concept?
8. Explain the use of rmdir command in Linux.
9. Explain how to access a variable in Linux shell.
10. How to store numbers in Linux shell?

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. Give an account of biologically significant patterns and motifs.
12. Explain profile HMMs.
13. Explain the major genetic operators used in genetic algorithms.
14. Explain with example changing file permission in Symbolic mode.





15. Comment I/O redirection.
16. Comment on different mode in vi editor.
17. Comment on sh shell and bash shell.
18. Comment on different variables in Linux.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. Explain the algorithms used in PSI-BLAST and PHI-BLAST.
20. Define profile HMM. Outline its applications in functional annotation.
21. List out different types of neural networks and explain its applications in biology with examples.
22. Explain about decision making statements in Linux.

(2×5=10 weightage)

