QP CODE: 25022230

25022230

Reg No : .....

Name : .....

M.Sc DEGREE (CSS) SPECIAL REAPPEARANCE EXAMINATION, APRIL 2025

Third Semester

M.Sc BIOINFORMATICS

CORE - BT010304 - ADVANCED BIOINFORMATICS & LINUX OPERATING SYSTEM

2019 ADMISSION ONWARDS

60BD9B0F

Time: 3 Hours Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. List any three examples of sequence patterns with known functions.
2. What are Alu sequences?
3. What are Discrete-Time Markov Chains?
4. What do you mean by forward algorithm in HMM?
5. Comment on regression in ML.
6. Cite examples of the applications of SVMs in biology.
7. Who are 'other' users regarding files in Linux
8. Comment on insert mode in vi editor.
9. What is bash?
10. Explain how to get the input from the user in Linux.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. Explain the role of regular expressions in pattern finding.
12. How HMMs are used in pairwise alignment?
13. What are the various types of neural networks?
14. What is kernel in Linux?
15. Comment on different users of a file Linux.

16. Comment on different types of redirection in Linux.

17. Comment on environment variables in Linux.

18. Comment on Mathematical & String Comparisons 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. Explain Hidden Markov models and its applications in life sciences.

21. Define machine learning. Explain the various machine learning approaches.

22. Explain about decision making statements in Linux.

(2×5=10 weightage)