

M.Sc. DEGREE EXAMINATION NOVEMBER 2019
BIOINFORMATICS
THIRD SEMESTER

COURSE : ELECTIVE
PAPER : FUNDAMENTALS OF BIOINFORMATICS
TIME : 3 HOURS **MAX. MARKS: 100**

SECTION A

(20x1=20)

Answer ALL questions.

1. PubMedCentral
2. KEGG
3. Homology
4. Write amino acid names for code K, R, W, E?
5. BLAST
6. PSSM
7. T-Coffee
8. PAM
9. Cladistics
10. Fitch–Margoliash method
11. BLOSUM
12. Molecular clock
13. Global alignment
14. Viral genome
15. EcoRI
16. GLIMMER
17. PHYLIP
18. miRNA
19. Hybridization probe
20. Enhancer

SECTION B

Answer any FOUR questions in 200 words

(4x10=40)

21. Brief about information retrieval from biological databases?
22. Write in detail about Substitution Matrix?
23. Explain progressive alignment along with example?
24. Write about BLAST programs and its applications?
25. Write a short note on (a) Bifurcating tree (b) Phenetics (c) Cladogram
26. Explain restriction mapping and its steps?
27. Explain in detail about steps in DNA microarray analysis?

SECTION C

Answer any TWO questions in 1000 words

(2x20=40)

28. Explain steps in Needleman–Wunsch algorithm & Smith–Waterman algorithm.
29. Briefly describe about the methods of Phylogenetic tree construction?
30. Write in detail about biological databases-NCBI and EMBL.
31. Write in detail about gene finding methods.
