

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI 600 086
(For candidates admitted during the academic year 2015 – 2016 & thereafter)

SUBJECT CODE: 15BI/PE/FB34

M.Sc. DEGREE EXAMINATION NOVEMBER 2016
BIOINFORMATICS
THIRD SEMESTER

COURSE : ELECTIVE
PAPER : FUNDAMENTALS OF BIOINFORMATICS
TIME : 3 HOURS

MAX. MARKS: 100

SECTION A

(20x1=20)

Answer ALL questions.

1. What are biological databases?
2. Entrez.
3. PHYLIP
4. Single letter code for trptophan, tyrosine, proline and phenylalanine.
5. PAM.
6. BLOSUM
7. FASTA
8. BLAST
9. Phylogeny
10. Rooted tree
11. Dendogram
12. CLUSTAL W.
13. Genome
14. Orthologs.
15. Paralogs.
16. Define gene.
17. Probe.
18. Hybridization.
19. DNA Chip.
20. Target.

SECTION-B

Answer any FOUR questions in 200 words

(4x10=40)

21. How do you retrieve a sequence?
22. Explain pair wise alignment in detail.
23. Detail on advanced BLAST search.
24. With due illustration describe the clustering methods.
25. What are the different types of Microarray?
26. GEO database.
27. Explain multiple sequence alignment.

SECTION-C

Answer any TWO questions in 1000 words

(2x20=40)

28. Discuss on the different types of biological databases.
29. Explain Needleman-Wunsch algorithm & Smith-Waterman algorithm.
30. A) Phylogenetic analysis B) Restriction mapping
31. Explain the principle and application of Microarray.
