

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted from the academic year 2019– 2020 & thereafter)

M. Sc. DEGREE EXAMINATION, NOVEMBER 2023
BIOINFORMATICS
THIRD SEMESTER

COURSE : CORE
PAPER : ALGORITHMS FOR BIOINFORMATICS
SUBJECT CODE : 19BI/PC/AL34
TIME : 3 HOURS **MAX. MARKS: 100**

SECTION - A

ANSWER ANY TEN QUESTIONS: (10x10=100)

1. Describe in details about the Big-O-Notation.
2. Discuss about the Exhaustive Search Branch-and-Bound Algorithms
3. Write brief account on Practical Restriction Mapping Algorithm
4. Explain the salient features of constructing profile matrix in finding the regulatory Motifs
5. Compare the Global Sequence Alignment with Local Sequence Alignment
6. DNA Arrays as an Alternative Sequencing Technique – Justify
7. Illustrate the salient features of Graph Algorithms
8. Distinguish between Hierarchical Clustering and k-Means Clustering
9. Sketch the construction of evolutionary tree by Character-Based method
10. Explain the tools used for secondary Structure Prediction
11. Summarize the importance of Artificial Neural Networks in Bioinformatics
12. Give a brief account on comparing a Sequence against a Database by BLAST algorithm
