STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted from the academic year 2015 – 2016)

SUBJECT CODE: 15BI/PC/GP34

M. Sc. DEGREE EXAMINATION, NOVEMBER 2016
BIOINFORMATICS
THIRD SEMESTER

COURSE   : **CORE**
PAPER   : **GENOMICS AND PROTEOMICS**
TIME   : **3 HOURS**   **MAX. MARKS: 100**

SECTION – A

ANSWER ALL THE QUESTIONS: **(20x1=20)**

1. Molecular clocks.

2. Characteristic features of Gene.

3. Positive selection.

4. How do you locate a gene in a genome?

5. Synteny

6. ORF

7. Viral Genomes

8. MZEF

9. SAGE

10. EST

11. KEGG

12. UNIGene

13. 2D-SDS-PAGE

14. Tandem LC

15. Preparative IEF

16. Y2H

17. Protein-Protein Interaction

18. Restriction enzymes

19. Give examples for proteolytic enzymes

20. How do protein undergo modifications?

SECTION – B

ANSWER ANY FOUR QUESTIONS IN 300 WORDS EACH. ALL QUESTIONS CARRY EQUAL MARKS: (Draw Diagrams wherever necessary) (4x10=40)

21. Explain the experimental techniques for locating a gene.

22. Phylogenetic Analysis.

23. Application of microarray in Medicine.

24. Explain in detail the concept of mapping protein modifications.

25. What are the different methods for digesting a protein?

26. Explain the protein – protein Interaction with yeast hybrid model.

27. Comparative Genomics.

SECTION – C

ANSWER ANY TWO QUESTIONS IN 300 WORDS EACH. ALL QUESTIONS CARRY EQUAL MARKS: (Draw Diagrams wherever necessary) (2x20=40)

28. How do you analyze an unknown gene?

29. How do you predict a gene and list the applications of genome analysis?

30. Explain Human Genome Project in detail.

31. Explain Mass Spectrometry.

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