STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI –600 086
(For candidates admitted from the academic year 2011 – 12 & thereafter)

SUBJECT CODE: 11BI/PC/RB44

M. Sc. DEGREE EXAMINATION, APRIL 2014
BIOINFORMATICS
FOURTH SEMESTER

COURSE : CORE
PAPER : RECENT ADVANCES IN BIOINFORMATICS
TIME : 3 HOURS **MAX. MARKS: 100**

SECTION – A

ANSWER ALL QUESTIONS **(20 X 1=20)**

1. Pharmacogenomics
2. ADME
3. eMolecules
4. SMILES
5. Mention some tools in epitope mapping..
6. MAML
7. R programming
8. GEO
9. Cheminformatics
10. Mention some chemical structure drawing packages
11. Toxicogenomics
12. Pubchem
13. Molecular fingerprints
14. Bioconductor
15. Limma
16. R packages
17. Installation of R
18. Microarray
19. Types of Microarray
20. Techniques involved in Microarray

..2

SECTION – B

ANSWER ANY FOUR QUESTIONS. EACH ANSWER SHOULD NOT EXCEED 500 WORDS. (4 X 10 = 40)

21. Write short notes on SMILES.
22. Write an account on NCBI and Microarray Data Management.
23. Explain the concept of molecular descriptors.
24. What is the role of immunoinformatics in personalized medicine?
25. Write a short note on epitope mapping.
26. Discuss the 2D and 3D molecular structures of chemicals.
27. Describe the concept of graphics in R.

SECTION – C

ANSWER ANY TWO QUESTIONS. EACH ANSWER SHOULD NOT EXCEED1200 WORDS. (2 X 20 = 40)

28. Write notes on the various aspects of Pharmacokinetics and metabolism.
29. Describe the basic steps of DNA microarray experiment and mention its types.
30. Discuss the role of pharmacogenomics and toxicogenomics in treating Alzeimer's disease.
31. Write the concept of R programming

****