**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI –600 086**
**(For candidates admitted during the academic year 2015 – 16 & thereafter)**

**SUBJECT CODE: 15BI/PE/DM14**

**M. Sc. DEGREE EXAMINATION, APRIL 2017**
**BIOINFORMATICS**
**SECOND SEMESTER**

**COURSE: ELECTIVE**
**PAPER: DATA MINING**
**TIME: 3 HOURS** **MAX.MARKS: 100**

**SECTION – A**

**ANSWER ALL QUESTIONS** **(20X1=20 MARKS)**

1. OLAP
2. Data discrimination
3. Flat files
4. Evolution and deviation analysis
5. Clustering
6. UPGMA
7. k-nearest neighbors algorithm
8. Biomedical text mining
9. Tasks in data preprocessing
10. Application of the Apriori algorithm for adverse drug reaction detection
11. Data Cleaning
12. Classification
13. Grid-based clustering
14. Important areas of data mining
15. Data Mining applications in Genomics and Proteomics
16. Outlier
17. Decision Trees
18. Artificial neural network
19. Axon
20. Support Vector Machines

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## SECTION – B

**ANSWER ANY FOUR QUESTIONS. (4X10=40 MARKS)**

21. Describe the various functionalities of Data mining as a step in the process of knowledge discovery.
22. What kind of Data can be mined?
23. Discuss major issues of data mining.
24. Write in detail about Spatial Data Mining.
25. Discuss briefly the different steps in preprocessing of data.
26. Write in detail about Clustering methods.
27. Discuss about Neural Networks.

## SECTION – C

**ANSWER ANY TWO QUESTIONS (2X20=40 MARKS)**

28. Write in detail about data mining classification and its applications.
29. Explain the Apriori algorithm. Also explain how the association rules are generated from frequent item sets.
30. Write in detail about Role of Data Mining in Bioinformatics.
31. Write in detail about SOM and its algorithm in data mining.

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