

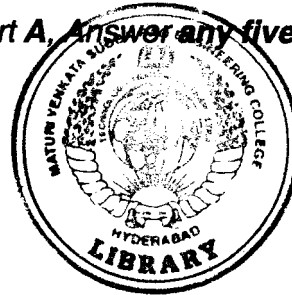
FACULTY OF INFORMATICS
B.E. 4/4 (IT) I Semester (Main) Examination, December 2011
DATA WARE HOUSING AND DATA MINING (Elective – II)

Time: 3 Hours]

[Max. Marks: 75

Note : Answer all questions from Part A, Answer any five questions from Part B.

PART – A



(25 Marks)

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|--|---|
| 1. Define data mining and data warehouse. | 2 |
| 2. Define the following OLAP operations : | 2 |
| a) Rollup | |
| b) Pivot. | |
| 3. Define the following types of data in cluster analysis. | 3 |
| a) Categorical variable | |
| b) Ordinal variable. | |
| 4. Write the difference between ROLAP and MOLAP. | 2 |
| 5. Define frequent item set. | 2 |
| 6. Give two objects represented by the tuples (22, 1, 42, 10) and (20, 0, 36, 8).
Compute the Manhattan distance between the two objects. | 3 |
| 7. Define the following terms. | 3 |
| a) Spatial mining | |
| b) Text mining | |
| c) WWW mining. | |
| 8. Define support and confidence of an association rule. | 2 |
| 9. Define any three data mining functionalities. | 3 |
| 10. Define the following decision tree pruning techniques. | 3 |
| a) Prepruning | |
| b) Post pruning. | |

PART – B

(5×10=50 Marks)

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|--------|--|----|
| 11. a) | Explain the process of KDD with a neat diagram. | 5 |
| b) | Explain min-max and z-score normalization techniques. | 5 |
| 12. a) | Explain three tier data warehouse architecture with a neat diagram. | 6 |
| b) | Write the any 5 differences between OLTP and OLAP systems. | 4 |
| 13. a) | State the Bayes theorem and Bayesia belief networks. | 4 |
| b) | Explain classification by decision tree induction with neat diagram. | 6 |
| 14. a) | Explain distance based outlier detection method. | 5 |
| b) | Explain density based outlier detection method. | 5 |
| 15. a) | Explain how to construct the spatial data cube and spatial OLAP. | 5 |
| b) | Explain spatial associations and co-location patterns. | 5 |
| 16. | Explain how to mine the frequent items using Apriorp Algorithm with example. | 10 |
| 17. a) | Explain data warehouse star schema with neat diagram. | 5 |
| b) | Explain data warehouse fact-constellation schema with neat diagram. | 5 |