

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 0105

Roll No.

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B.Tech.

(SEM. VII) ODD SEMESTER THEORY EXAMINATION 2010-11

DATA MINING AND DATA WAREHOUSING

Time : 3 Hours

Total Marks : 100

Note :— Attempt *all* questions.

1. Attempt any *two* parts of the following :— (10×2=20)
 - (a) (i) Identify and describe the basic phases in KDD process.
 - (ii) Describe the basic architecture of Data Warehouse.
 - (b) Explain the multi dimensional data and data cube. Describe the basic operations performed on data cube.
 - (c) What do you mean by cleaning of the data ? Explain the important types of data cleaning.
2. Attempt any *two* parts of the following :— (10×2=20)
 - (a) What is association rule mining ? Explain the Apriori algorithm to find the frequent item sets.
 - (b) Explain the mining multidimensional association rules from relational databases and data warehouses.
 - (c) Discuss why analytical characterization and attribute relevance analysis are needed and how these can be performed ?

3. Attempt any *two* parts of the following :— (10×2=20)
- What is a decision tree ? Explain the classification by decision tree induction. Describe the tree pruning.
 - Describe the neural network. How the neural network useful in classification ? Explain.
 - Find and write the basic differences between clustering and classification. Describe the density-based clustering method based on connected regions with sufficiently high density (DBSCAN).
4. Attempt any *two* parts of the following :— (10×2=20)
- Draw and explain the three-tier architecture of data warehouse model.
 - What is data mart ? Explain its role in data warehousing.
 - Discuss the differences between data warehouse and database system.
 - Describe the star, snowflake and fact constellations schemas for multidimensional database.
5. Attempt any *two* parts of the following :— (10×2=20)
- Explain the aggregation. How does the OLAP handle the aggregation ? Explain the differences between OLAP and MOLAP.
 - Describe the MOLAP and ROLAP in brief. Write their contribution in building of data warehouse.
 - Explain the following :—
 - Tuning Data Warehouse
 - Testing Data Warehouse.