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MCA/M09 6250

Data Mining and Warehousing

Paper : MCA-402

Time : Three Hours] [Maximum Marks : 50

Note :- Attempt **FIVE** questions in all, selecting **ONE** question from each unit.

UNIT–I

1. (a) What is data warehousing ? Describe the various characteristics of data warehouse and why is it important for decision support ? 7

   (b) How do data warehousing OLAP and data mining complement each other ? 3

2. (a) What is meant by 'Multidimensional Data Model' ? How multidimensional data can be best represented ? 6

   (b) Give comparisons of the following Data Warehouse Schemes :- Star and Snowflake Schemes. 4

3. (a) What are the characteristics of the Data in a Data Warehouse ? 4

   (b) What are different components of a Data Warehouse ? Explain with the help of a diagram. 6

4. Explain the following :

   (a) Tools for Data Warehousing

   (b) Methods for the implementation of Data Warehouse Systems. 5×2=10

UNIT–II

5. (a) 'Data Mining is a multi-disciplinary field'. Discuss. 5

   (b) What is difference between data mining and a normal query environment ? What can data mining do that SQL can't ? Discuss. 5

6. (a) "All patterns are not interesting". Comment. What makes a pattern interesting ? 4

   (a) What is difference between descriptive mining and predictive mining ? Explain various methods for concept description. 6

7. Explain the following processes :- 10

   Data cleaning, Data Integration and Transformation, Data reduction.

UNIT–III

8. (a) What is 'Association Rule' ? What is the difference between support and confidence of a rule ? 4

   (b) What is meant by 'Association Rule Mining' ? Explain by presenting an example of Market Basket Analysis. 6

9. (a) How can you guide the mining procedure to discover interesting associations ? 3

   (b) Explain methods for mining association rules in :-

   (i) Mining multilevel association rules from transaction databases.

   (ii) Mining multidimensional association rules from relational databases. 7

10. Write short notes on the following :- 5×2=10

    (a) Applications of Data Mining

    (b) Tools for data mining.