USN | | | | | | | | | | **10MCA542**

Fifth Semester MCA Degree Examination, December 2012
Data Warehousing and Data Mining

Time: 3 hrs.   Max. Marks:100

Note: *Answer any FIVE full questions.*

1   a. What is Data mining? Explain the challenges that motivated the development of data mining. **(10 Marks)**
    b. Discuss the different types of data sets in data mining. **(10 Marks)**

2   a. What is data preprocessing? What are the steps involved in it? Explain any two steps in detail. **(08 Marks)**
    b. What is Euclidian distance? Write the generalized Minkowski distance metric for different values of r. **(08 Marks)**
    c. Consider the following two binary vectors
       X = (1,0,0,0,0,0,0,0,0,0)   Y = (0,0,0,0,0,0,0,1,0,0,1). Find i) Simple matching coefficient (SMC) ii) Jauard coefficient. **(04 Marks)**

3   a. Define the following with an example to each :
       i) Association rule   ii) Support of a rule   iii) Confidence of a rule. **(06 Marks)**
    b. State and illustrate using lattices the apriori principle, with an example. **(08 Marks)**
    c. Describe briefly the criteria for evaluating the quality of association pattern. **(06 Marks)**

4   a. Explain hunt's algorithm for the inducing decision trees. **(10 Marks)**
    b. Describe the different methods used for estimating predictive accuracy of classification. **(10 Marks)**

5   a. What is cluster analysis? Explain with example. Explain the types of cluster analysis methods. **(12 Marks)**
    b. Write a note on quality and validity of cluster analysis methods. **(08 Marks)**

6   a. Define web mining. Explain the following with an example.
       i) Web content mining   ii) Web structure mining   iii) Web usage mining. **(14 Marks)**
    b. Write a note on mining spatial and temporal databases. **(06 Marks)**

7   a. Define operational data store (ODS). Explain operational data store structure, with diagram. **(10 Marks)**
    b. Compare ODS and data ware house. **(05 Marks)**
    c. Briefly explain the implementation steps while building a data warehouse. **(05 Marks)**

8   a. Define OLAP. Explain FASMI characteristic of OLAP systems. **(10 Marks)**
    b. Explain the guidelines for successful implementation of OLAP. List out any six OLAP software available in the market. **(10 Marks)**

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