Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 02

Total No. of Questions : 09

MCA (2013 and 2014 Batch)   (Sem.–4)
DATA WAREHOUSING AND MINING
Subject Code : MCA-401
Paper ID : [A2555]

Time : 3 Hrs.   Max. Marks : 100

INSTRUCTION TO CANDIDATES :
1. **SECTIONS-A, B, C & D contains TWO questions each carrying TWENTY marks each and students has to attempt any ONE question from each SECTION.**
2. **SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.**

SECTION-A

1. a. What is the need of data warehouse? Explain and justify.

   b. What are various data pre-processing techniques?

2. a. Discuss the architecture of spatial systems.

   b. What are different topological relationships and spatial levels in spatial systems?

SECTION-B

3. a. What are temporal data types? Discuss the temporal support for temporal hierarchies.

   b. What are temporal granularities? How they differ from temporal relations?

4. a. Explain the temporal query :

   SELECT * FROM Employee

   FOR SYSTEM_TIME

   BETWEEN '2015-01-01 00:00:00.0000000' AND '2016-01-01 00:00:00.0000000' WHERE Employee ID = 1000 ORDER BY ValidFrom;

   b. Explain the issue of "Diversity in datatypes" and "User interaction" in data mining?

SECTION-C

5. a. Compare and contrast Bayesian classification with k-nearest neighbour.

   b. Explain the classification by Fuzzy set approach in detail.

6. a. State and explain Back Propagation Algorithm.

   b. Explain Regression model and log linear model of prediction.

SECTION-D

7. a. Explain the working of DBSCAN.

   b. Discuss features of k-means and k-Mediods.

8. Explain in detail the types of data in cluster analysis.

SECTION-E

9. **Write briefly :**

   a. What is cluster analysis?

   b. Define text mining.

   c. What does web mining mean?

   d. Define multimedia data mining.

   e. List out the features in Web data mining.

   f. What is Content-Based retrieval?

   g. What are the elements in Spatial Data mining?

   h. Describe the use of DBMiner.

   i. How data mining is used in banking industry?

   j. Write the types of data mining.