BMCI (2014 & Onwards)   (Sem.–5)
DATA WAREHOUSING & MINING
Subject Code : BMCI-504
Paper ID : [74106]

Time : 3 Hrs.   Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :
1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Answer briefly :

   a) Differentiate between operational and informational data stores.

   b) What is multidimensional data? Give two examples.

   c) What is OLAM?

   d) Define Data Mining.

   e) Briefly discuss the Snowflake schema.

   f) Discuss Discovery driven cube.

   g) What is a Decision Tree?

   h) What is Apriori algorithm?

   i) What are the different types of data used in cluster analysis?

   j) What are the parameters for selecting and using the right data mining technique?

SECTION-B

2. Differentiate between OLAP and OLTP.

3. What do you mean by data pre-processing? Explain the various stages in the process of data pre-processing.

4. What is Attribute-oriented Induction? Describe how this is implemented.

5. What is Constraint based Association mining? What kinds of constraints can be used in mining?

6. Explain Data Visualization with reference to data mining.

SECTION-C

7. Define Data warehouse. Elaborate in detail the design and construction of data warehouses.

8. Suppose that a data warehouse consists of the four dimensions date, spectator, location and game and the two measures count and charge, where charge is the fare that a spectator pays when watching a game on a given date. Spectators may be students, adults or seniors, with each category having its own charge rate.
   a) Draw a Star schema diagram for the data warehouse.

   b) Starting with the base cuboid [date, spectator, location, game], what specific OLAP

   operations should one perform in order to list the total charge paid by student spectators at GM_Place in 2015?

9. What is Clustering? Discuss the various clustering algorithms.