16282(D)   = 0 DEC 2016

B. Tech 8th Semester Examination

Data Mining & Data Warehousing (NS)

CS-423

Time : 3 Hours   **Max. Marks : 100**

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Candidates are required to attempt five questions in all selecting one questions from each sections A, B, C & D of the question paper and all the subparts of the questions in Section E.

SECTION - A

1. (a) What do you know about the time lines of data warehousing development? Differentiate between DBMS and Data Warehouse. (10)

   (b) Discuss three tier architecture of Data Warehouse. How this architecture helps in integrating data mining with data warehousing? (10)

2. (a) What are OLAP serves? Differentiate between MOLAP, ROLAP and HOLAP. (10)

   (b) What do you mean by distributed and virtual data warehouse? Discuss. (10)

SECTION - B

3. (a) What do you mean by data mart? Discuss the issues associated with data mart. (10)

   (b) What are the different types of data warehouse schema? Draw a neat sketch of snow-flake schema. (10)

4. Discuss the design methodology of data warehouse. What is the role of Oracle in data warehouse design? How testing and maintenance is performed in data warehouse? (20)

SECTION - C

5. (a) Define data mining? Discuss knowledge discovery life cycle of Data mining. (10)

   (b) Whether all patterns are interesting? Comment. (10)

6. (a) What do you mean by clustering? Differentiate between modal based, grid based and partition based technique. (10)

   (b) Briefly explain

   (i) Genetic algorithm   (ii) Fuzzy technique   (10)

SECTION - D

7. (a) Differentiate between temporal, non temporal and bitemporal databases. (10)

   (b) Discuss the potential issues and challenges in data mining. (10)

8. (a) What do you mean by multimedia databases? What are its content? How you will design multimedia databases? (10)

   (b) List and discuss the different application areas of data mining. (10)

SECTION - E

9. Write short note on the following:

   (a) Nonvolatile feature of data warehouse.

   (b) Data warehouse recovery.

   (c) Fact and dimension.

   (d) Aggregate tables.

   (e) Incremental mining.

   (f) What is information gain while designing a decision tree?

   (g) Rough set theory.

   (h) Text databases.

   (i) Multidimensional database.

   (j) Sequence data.

   (10×2=20)