VRK/KS/14/3213

Faculty of Engineering & Technology

Eighth Semester B.E. (Computer Science) Examination

DATA WAREHOUSING AND MINING (NEW)

Elective—IV

Sections—A & B

Time—Three Hours] [Maximum Marks—80

INSTRUCTIONS TO CANDIDATES

(1) All questions carry marks as indicated.

(2) Answer **THREE** questions from Section A and **THREE** questions from Section B.

(3) Due credit will be given to neatness and adequate dimensions.

(4) Assume suitable data wherever necessary.

(5) Illustrate your answers wherever necessary with the help of neat diagrams.

SECTION—A

1. (a) What are the several stages of past decision support systems which leads to failure or were not satisfactory ? 7

   (b) Distinguish between :

   OPERATIONAL versus INFORMATIONAL SYSTEM. 6

2. (a) A Data Warehouse is an environment not a product. Discuss. 4

(b) Differentiate between Data Warehouse and Data Mart. 4

(c) What is Meta Data ? States its type and special significance. 5

3. (a) What are the various data sources for the Data Warehouse ? 5

(b) How data loading takes place in Data Warehouse ? 5

(c) Name any six different methods for information delivery. 4

4. (a) Explain the following terms with respect to business dimensions :

(i) Business metrics

(ii) Dimension hierarchies

(iii) Information package diagram. 6

(b) Describe the outline for requirements definition document. 7

5. Write short notes on :

(a) STAR SCHEMA–FACT TABLE 3

(b) STAR SCHEMA–DIMENSION TABLE 3

(c) FACTLESS FACT TABLE 3

(d) KEYS OF STAR SCHEMA 4

SECTION—B

6. (a) Describe Slowly Changing Dimensions (SCD). What are its three types ? Explain. 6

(b) What are the Aggregate Fact Tables ? Why there is a need of Aggregate Fact Table ? Illustrate different ways to Aggregate Fact Table. 7

7. Write short notes on : (any **THREE**) 13

(a) CONFORM DIMENSION

(b) SNAP SHOT AND TRANSACTION TABLE

(c) RAPID CHANGING DIMENSION

(d) JUNK DIMENSION

(e) FAMILY OF STARS.

8. (a) Briefly explain multidimensional analysis. 5

(b) What is Hypercubes ? How do they apply in an OLAP system ? 5

(c) Differentiate between MOLAP and ROLAP. 4

9. (a) Is the data warehouse a prerequisite for data mining ? How does the data warehouse help data mining ? 3

(b) How does the Memory Based Reasoning (MBR) technique work ? What is the underlying principle ? 4

(c) Distinguish between OLAP and DATA MINING. 6

10. Give application of Data Mining in : 13

(a) Retail Industry

(b) Telecommunications Industry

(c) Banking and Finance.