Exam. Code : 206703
Subject Code : 4798

M.Sc. Computer Science 3rd Sem. (Batch 2020-22)
DATA MINING AND WAREHOUSING
Paper—MCS-303

Time Allowed—3 Hours] [Maximum Marks—100

Note :— Attempt **FIVE** questions in all, selecting at least **ONE** question from each Section. The **FIFTH** question may be attempted from any Section. All questions carry equal marks.

SECTION—A

1. (a) What is the use of the Data Warehouse ? Explain the differences between Operational Database Systems and Data Warehousing. 10
   (b) Why there is a need of separate Data Warehouse ? Explain. 10
2. Discuss the concept of Multidimensional Data Model. Explain how it is implemented in relational tables and standard form analytic workspaces. 20

SECTION—B

3. (a) What are the steps required for design and construction of Data Warehouse ? 10
   (b) Explain layered architecture of data warehouse. 10
4. (a) Differentiate between OLTP and OLAP. 10
   (b) Explain different types of OLAP Servers. 10

SECTION—C

5. Discuss how computations can be performed efficiently on data cubes. Explain in detail. 20
6. (a) What is indexing OLAP data ? What are the different methods available for this purpose ? 10
   (b) Explain the concept of :—
   (i) Metadata Repository
   (ii) Data Warehouse Utilities. 2×5=10

SECTION—D

7. (a) Explain various steps involved in Data Mining Process. 10
   (b) Write short notes on :—
   (i) Predictive Modelling
   (ii) Link Analysis. 2×5=10
8. What do you mean by Data Mining Query Language? How Data specification knowledge specification, Hierarchy specifications and Pattern Presentation specification can be performed in the language ? 20