ELECTIVE II (CHOOSE ANY ONE)

4MSC3(A) – DATA WAREHOUSING AND MINING

UNIT–I

Need for strategic information, Decision support system, Knowledge discovery & decision making, need for data warehouse, definitions of Data warehousing and data mining, common characteristics of Data warehouse, Data Marts, Metadata, Operational versus analytical databases, trends and planning of Data warehousing.

UNIT–II

Defining business requirements, Data modeling strategy, Fact tables, dimensions, Star schema and other schemas, Multi dimensional data models, Data Cube presentation of fact tables, using the Data warehouse, Designing tools for Data warehouse, OLAP models and operations.

UNIT–III

Architectural components, Infrastructure: Operational & Physical, Extraction, Transformation and Loading, Components of an Oracle Data warehouse, Data Transformation Functions, DBA responsibilities, Capacity Planning.

UNIT–IV

Implementation of Data warehouse, Physical design: steps, considerations, physical storage, indexing, Performance Optimization, Data warehouse deployment activities, Data security, backup and recovery concepts, Data warehouse Maintenance.

UNIT–V

Basics of data mining, related concepts, Data mining techniques, Data Mining Algorithms — Classification, Clustering, and Association rules, Knowledge Discovery in databases(KDD) Process, Introduction to Web Mining:

Reference Books :

❑ **Data Warehousing Fundamentals,** by Paulraj Ponnian, John Wiley.

❑ **Data warehousing with oracle** by Sima Yazdani – Shirley S Wong

❑ **Data Mining Concepts and Techniques,** Han Kamber, Morgan Kaufmann

❑ **Introduction to Business Intelligence and Data Warehousing,** PHI

❑ **The Data Warehouse Lifecycle toolkit,** Ralph Kimball, John Wiley.