

**M.C.A. SEM – IV
MCA-45 : Data Warehouse & Data Mining**

Teaching Scheme (per week)		Examination Scheme					
		INT		EXT		TOTAL	
Th. (hours)	Pr. (hours)	Th. (marks)	Pr. (marks)	Th. (marks)	Pr. (marks)	Th. (marks)	Pr. (marks)
4	--	30	--	70	--	100	--

UNIT I (25%)

Data Warehouse: An overview, Architectural Perspective, & Modeling : Data warehouse, Functional Requirements, Data Mart, Possible Approach, Usage Survey, Characteristics, Software Architecture: Three Layers, Design, Non functional Architecture Requirements, Functional Dimension, Data Dimension, Basic Principles of Data warehousing Modeling, User Requirements, Requirements Modeling, Temporal Data Modeling, Temporal Data Modeling Styles.

UNIT II (25%)

Multidimensional Data modeling An overview, Usage Survey, Metadata : Business Intelligence Implementation Project, Requirement Analysis Using MDDM, MDDM Base Concepts, Requirement Modeling, Geographical Information System and Relational Database, DB2 Spatial Extender, Data Analysis Processing and Techniques, OLAP, Metadata: Types of Metadata, Sources of Metadata, Metadata Standards

UNIT III (25%)

Data Mining: An Overview: Data Mining, Data Mining Functionalities, Classification of Data Mining Systems, Discovery Vs. Verification Mode Analysis, Data Mining Process, Application Domains, Data Mining Techniques: Classification, Association Detection, Sequential Pattern Detection, Automatic Cluster Detection, Similar Time Sequence Detection, Data Mining Scenario

UNIT IV (25%)

Characterization and Comparison & Applications and Trends in Data Mining : Characterization and Comparison: Data Generalization and Summarization, Based Characterization, Analytical Characterization: Analysis of attribute relevance, Mining Class Comparisons: Discriminating Between Different Classes, Mining Descriptive Statistical Measures in Large Database **Data Mining Applications:** Data Mining System Products and Research Prototypes, Additional Themes of Data Mining, Social Impacts of Data Mining, Trends in Data Mining.

Books:

1. IBM An Introduction to Building the Data Warehouse By PHI Publication.
2. Data Mining: Concept and Techniques By Jiawei Han and Micheline Kamber Morgan Kaufmann Publishers

Reference Book:

1. Principles of Data Mining By David Hand, Heikki Mannila, and Padhraic Smyth By PHI Publication.