904: Data Warehousing & Data Mining [Elective-I]

Unit : 1 [25%]

Data Warehouse: An Overview, Architecural, Prospective and Modeling :

Definition, Usage and trends, DBMS V/S Data Warehouse, Data Mart, Data Warehouse Process and Architecture, Characteristics of Data Warehouse, Need for Data Warehouse, Basic Elements of Data Warehouse, Basic Principal of Data warehousing Modeling, User Requirements, Requirement Modeling, Temporal Data Modeling, Temporal Data Modeling Style.

Unit : 2 [25%]

Multidimensional Data Modeling an Overview, Usage Serve, Metadata:

Multidimensional Data Model, Schema for Multidimensional Database: Star and Snowflake Model, MDDM Base Concepts, Requirement Analysis Using MDDM, Geographical Information System and Relational Database, DB2 Spatial Extender, OLAP V/S OLTP, ROLAP V/S MOLAP, Types of OLAP server, Metadata: Types of Metadata, Source of Metadata.

Unit : 3 [25%]

Data Mining:

An Overview: definition, Data mining as process and Functionality, KDD V/S Data mining, Data Mining Techniques: Classification, Association Detection, Sequential Pattern Detection, Automatic Cluster Detection, Similar Time Sequence Detection, Data Mining Application, Discovery V/S Verification Mode.

Unit : 4 [25%]

Advanced Topics, Trends and Web Mining:

Mining Complex Data Objects: Spatial Mining, Temporal Mining, Multimedia database, Web content mining, Web Structure and usage mining, Data Generalization and summarization, Mining Class Comparison and Characterization, Application, Additional Themes on mining, Trends in mining.

Text Book:
1. IBM An Introduction to Building the Data Warehouse by PHI Publication.
2. J. Han, M. kamber, "Data Mining: Concept and Techniques".

Reference Books:
1. Principal of Data Mining By David Hand, Heikki Manila PHI 2004.
2. W. H. Immon "Building the Data Warehouse" 3rd Edition Wiley 2003.