Elective II
MCA-22 Electronic Commerce

Unit 1 : Building Blocks of Electronic Commerce

Introduction, internet and networking technologies, Internet and network protocols, web server scalability, software technologies for building E-commerce applications, distributed objects, object request brokers, component technology, web services, web application architectures, BizTalk
framework Compliant Server

Unit 2 : Security of E-commerce transactions

Review of cryptographic tools, authentication, signatures, observers, anonymity, privacy, traceability, key certification, management and escrow

Unit 3 : Payment protocols and standards

Smart card, e-cash, e-wallet technologies, electronic money and electronic payment systems, business models for electronic commerce, electronic marketplaces, auctions and other market mechanisms, design of auctions, optimization algorithms for marketplaces, multi-agent systems.

Unit 4 : Global eCommerce and Law

Cyber law in India. Comparative evaluation of Cyber laws of certain countries.

Suggested readings:

1. Ravi Kalakota, Andrew Winston, "Frontiers of Electronic Commerce", Addison Wesley.
2. Bajaj and Nag, "E-Commerce the cutting edge of Business", TMH
3. P. Loshin, John Vacca, "Electronic commerce", Firewall Media, New Delhi

MCA-22 Data Mining and Data Warehousing

Unit 1: Introduction to Data Mining :

 Motivation and   importance, What is Data Mining, Relational   Databases, Data Warehouses, Transactional Databases, Advanced Database Systems and Advanced Database Applications, Data Mining Functionalities, Interestingness of a pattern Classification of Data Mining Systems, Major issues in Data Mining.

Unit 2 : Data Warehouse and OLAP Technology for Data Mining

What is a Data Warehouse?   Multi-Dimensional Data Model,   Data Warehouse Architecture, Data Warehouse   Implementation,   Development   of   Data   Cube   Technology,   Data Warehousing to Data Mining

Unit 3 : Data Preprocessing

Why Pre-process the Data? Data Cleaning, Data Integration and Transformation

Data Reduction, Discretization and Concept Hierarchy Generation

Unit 4 : Data Mining Primitives, Languages and system Architectures

Data Mining Primitives: What defines a Data Mining Task? A Data Mining query language Designing Graphical Use Interfaces Based on a Data Mining Query language Architectures of Data Mining Systems

Unit 5 : Concept Description: Characterization and comparison

What is Concept Description? 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 Databases

Unit 6 : Mining Association rule in large Databases

Association Rule Mining, Mining Single -Dimensional Boolean Association Rules from Transactional Databases,   Mining Multilevel Association Rules from Transaction Databases, Mining Multidimensional Association Rules from Relational Databases and Data Warehouses,   From Association Mining to Correlation Analysis, Constraint-Based Association Mining

Unit 7 : Classification and prediction

Concepts and Issues regarding Classification and Prediction, Classification by Decision Tree Induction, Bayesian Classification, Classification by Backpropagation, Classification Based on Concepts from Association Rule Mining, Other Classification Methods like k-Nearest Neighbor Classifiers, Case-Based Reasoning, Generic Algorithms, Rough Set Approach, Fuzzy Set Approaches, Prediction, Classifier Accuracy

Unit 8 : Cluster Analysis

What is Cluster Analysis? Types of Data in Cluster Analysis, A Categorization of Major Clustering Methods

Suggested readings:

1. Berson, "Data Warehousing, Data-Mining & OLAP", TMH
2. Mallach, "Decision Support and Data Warehousing System", TMH
3. Bhavani Thura-is-ingham, "Data-Mining Technologies, Techniques Tools & Trends", CRC Press
4. Navathe, "Fundamental of Database System", Pearson Education
5. Margaret H. Dunham, "Data-Mining. Introductory & Advanced Topics", Pearson Education

6. Pieter Adriaans, Dolf Zantinge, "Data-Min ing", Pearson Education