B. Com. – III

Group 'M': Mathematics & Computer

Paper No. XXI-B: Computer Applications

1. **Computer Networks & Network Security:** (a) Networking Concepts – Need and Scope, Benefits, Classification: LAN, MAN, WAN, VPN; Peer-to-Peer, Client Server, Components – NIC, Router, Switch, Hub, Repeater, Bridge, Gateway, Modem, Network Topologies – Bus, Star, Ring, Mesh, Hybrid, Architecture: Token Ring, Ethernet Transmission Technologies and Protocols – OSI, TCP/IP, ISDN etc., Network Operating System; (b) Local Area Networks – Components of a LAN, Advantages of LAN; (c) Client Server Technology, Limitation of Single user systems and need for Client Server Technology, Server – Database, Application, Print Server Servers, Transaction servers, Internet servers, Mail, Servers, Chat servers, IDS, Introduction to 3-tier and "n" tier architecture (COM, COM+); (d) Data centres: Features and functions, Primary delivery centre and disaster recovery site; (e) Network Security, Need; Treats and Vulnerabilities; Security Levels; techniques.

2. **Computer Software:** Application Software – Financial Accounting, Payroll, Inventory; Specialized Systems – Enterprise Resource Panning (ERP), Artificial Intelligence, Expert Systems, Decision Support Systems – An Overview.

3. **Data Base Management Systems:** (a) DBMS Models and Classification: Need for Database, Administration, Models, DML and DDL (Query and Reporting); Data Dictionaries, Distributed Databases, Object Oriented Databases, Client Server Databases, Knowledge Databases, (b) Backup and Recovery – Backup policy, Backup schedules, Offsite Backups. Recycling of Backups, Frequent Checking of recovery of Backup; (c) Usage of systems Software like program library management systems and tape and disk management systems – features, functionalities, advantages; (d) Data Mining and Data Warehousing – An Overview.

4. **Internet and other Technologies:** (a) Internet and World-Wide-Web, Intranets, Extranets, Applications of Internet, Internet Protocols, (b) E-commerce – Nature, Types (B2B, B2C, C2C), Suppl;y Chain Management, CRM, Electronic Data Interchange (EDI), Electronic Fund Transfers (EFT), Payment Portal, E-commerce Security; (c) Mobile Commerce, Bluetooth and Wi-Fi.

5. **Flowcharts and Decision Table:** (a) Programming process, Program Analysis, Flowcharts, Program flowcharts, (b) Types of Decision Tables, Steps in preparing a limited entry decision table, Flowchart for a decision table, Advantages and disadvantages of decision tables.