

Unit : 1**[5%]****Review of Basic Concepts**

Standards – Internet – History- OSI model – Protocol suite – Addressing – Transmission media – Local Area and Wide Area Networks – Switching – Connecting devices – IP addressing

Unit : 2**[25%]****Internet Protocol**

Subnetting – Supernetting – IP packets – Delivery – Routing – Routing model – Routing table – Datagram – Fragmentation – Checksum – IP Design – ARP – RARP – Internet control message protocol – Internet group management protocol

Unit : 3**[20%]****Transmission Control Protocol**

User Datagram protocol – UDP operation – Use – UDP design – TCP services – Flow control – Error control – TCP- connection – Transition diagram – Congestion control

Unit : 4**[35%]****Application Layer and Client Server Model**

Concurrency – BOOTP – DHCP – Domain name system – Name space – Distribution – Resolution – Messages – Telnet – Rlogin – Network Virtual Terminal – Character Set – Controlling the server – Remote login - File Transfer Protocol – Connections – Communication – Simple Mail Transfer Protocol – Simple Network Management Protocol – Hyper Text Transfer Protocol – Transaction – Request and Response message

Unit : 5**[15%]****Mobile IP**

Mobility, routing and addressing, characteristics, operation, foreign agent discovery , registration and communication, two crossing problem, communication with computers on the home front. TCP over Wireless and IPv6, Satellite Systems, Ultra Wideband Technology (UWB), Multimedia Services Requirements

Text Books:

1. Behrouz Forouzan , TCP/IP Protocol Suite, Second Edition, Tata McGraw Hill
2. Behrouz Forouzan ,Data communication & Networking, Second Edition, Tata McGraw Hill

Reference Books:

1. Andrew S Tanenbaum , Computer Networks, Fourth Edition, Prentice Hall
2. Douglas E. Comer , Internetworking with TCP/IP, Vol. 1, Principles, Protocols and Architecture Fifth Edition, Prentice Hall, 2000, ISBN 0-13-018380-6.
3. William Stallings, Data and Computer Communications , Seventh Edition, Pearson Education