H.N.G. University, Patan
M.Sc.(C.A. & I.T.) SEMESTER - VIII
801 : Networking - II

Unit : 1 **[10%]**

Review of Basic Concepts - Standards, Internet, History, OSI model, Protocol suite, Addressing, Transmission media, Local Area and Wide Area Ne tworks, Switching, Connecting devices, IP addressing, Subnetting, Supernetting, IPv6.

Unit : 2 **[25%]**

Internet Protocol - Delivery and Forwarding of IP packets – Forwarding, Routing Table, Datagram, Fragmentation, Checksum, IP Design, ARP, RA RP, Internet control message protocol, Internet group management protocol.

Unit : 3 **[25%]**

Transmission Control Protocol - User Datagram protocol - UDP operation, Use, UDP design, TCP services - Flow control, Error control, TCP, connection, Tr ansition diagram, Congestion control.

Unit : 4 **[20%]**

Application Layer and Client Server Model - DHCP, Domain name system - Name space, Distribution Resolution, Messages, Telnet(Rlogin),Network Virtual Terminal - Character Set, Controlling the server, File Transfer Protocol – Connections, Communication, Simple Mail Transfer Protocol, Simple Network Management Protocol, Mobile IP.

Unit : 5 **[20%]**

Telecommunications Management Network: Why TMN? **Broadband Network Management**: ATM Networks-Broadband Network and Services-ATM Technology-Virtual Path - Virtual Circuit. ATM Packet Size- Role of SNMP and ILMI in ATM Management - ATM Digital Exchange Interface Management

Text Books :

1. Behrouz Forouzan , TCP/IP Protocol Suite, 3rd and 4th edition, Tata McGraw Hill
2. Behrouz Forouzan ,Data communication & Networking, 4th edition, Tata McGraw Hill
3. Mani Subramanian, "Network Management: Principles and Practice", Addison -Wesley
4. Online Help

Reference Book :

1. Andrew S Tanenbaum , Computer Net works, Fourth Edition, Prentice Hall