

Syllabus for B.Sc-IT Course at S.P. College, Srinagar

SEMESTER - VI

SUBJECT: COMPUTER NETWORKS

COURSE CODE BIT- 601

UNIT - I

Goals and Application of Networks, Classification of Networks: LAN, MAN, & WAN, Network Topologies (Mesh Topology, Star Topology, Bus Topology, Ring Topology).
LAN Technologies: Ethernet, FDDI, CSMA /CD.
Virtual Local Area Network (VLAN).

UNIT-II

Switching techniques: Circuit Switching, Message switching & Packet Switching, Multiplexing.
Networking Standards & Protocols, OSI Reference Model, TCP/IP Model and their Comparison, Connection-Oriented & Connectionless Approaches

UNIT- III

Internetworks: Internetworking Concepts, Internetworking Devices: Repeaters, Hub, Bridges, Switches and Gateways.
Addressing: Internet Address, Classful IP Addressing and Subnetting.

UNIT - IV

Routing Packets: Static Versus Dynamic Routing.
Transport Layer: User Datagram Protocol (UDP), Transmission Control Protocol (TCP), Comparison between TCP and UDP.
Internet: Application and Services (E-Mail, HTTP, FTP, WWW), Comparison of Intranet and Internet, Network Security: Firewalls.

Reference:

4. William Stalling – “ Data & Computer Communication ”.
5. Behrouz A. Forouzna – “ Data & Communication & Networking ”.
6. Andrew Tanenbaum – “ Computer Networks ”.