KURUKSHETRA UNIVERSITY KURUKSHETRA
Course: B.Sc. (Hons) IT
Semester-III

Paper Code: BSIT-303
Nomenclature: -Telecommunication & Networking-I

Max. Marks: 40+10*
Time: 3hrs.

UNIT-I

Introduction to Telephone System: Data communication and its components, Topology, Transmission mode. Structure of the telephone system, local loop: Transmission Impairments Modems, Multiplexing: FDM, WDM and TDM.

UNIT-II

Switching and ISDN: Types of Switching, Circuit Switching, Space division switch, Time division switch, Crossbar switch.
Narrowband ISDN: ISDN Services, ISDN system architecture, ISDN interface. Perspective on N-ISDN.

UNIT-III

Computer Networks: Introduction to computer network, data transmission mode, network types, LAN topologies with its merits and demerits. Network Models: Client/ server network and Peer-to-peer network, OSI, TCP/IP, layers and functionalities.

UNIT-IV

Frame Relay: Architecture, Layers, Congestion Control & quality of service.
ATM: Design goals, Problems, Architecture, Switching, ATM layers.

Reference Books

1. Computer Networks, Prentice Hall, by Andrew S. Tanenbaum.
2. Data Communication and Networking, Tata McGraw Hill, by Behrouz A. Forouzan.

Note:

1. Syllabus in each Theory Paper is divided in 4 units.
   I. A Student is required to attempt 5 questions in all.
   II. Question No 1 is compulsory, consisting of short answer type questions based on all the 4 units.
   III. Two questions will be set from each unit. A student is required to attempt one question from each unit.
   IV. All questions carry equal marks.
2. Use of simple calculator is permissible.
3. Instructions should be imparted using SI system of units. Familiarity with CGS system of units should also be ensured.
4. Distribution of Marks: 40+10.
   * Each theory question paper will be of 40 marks of 3 hours duration and 10 marks in each theory paper are to be awarded through internal assessment in each semester.
5. Work load – 3 periods per week per theory paper