Paper No – 13 Data communication and networking

Unit No.	Topic Name	Content	Hrs.	Marks	Credit
1.	**Communication & Network securities.**	• Meaning - Definition – Types and channel of Communication • Different models of Communication • Barriers of Communication • Communication Media • Communication skills required for LIS • Issues and measures of Network Security • Attacks and security requirements • Confidentiality • Massage authentication and hash functions • Public- key encryption and digital signatures • Firewalls and anti-virus software			
2.	**Tele-communications**	• Elements and process of telecommunication • Development of telecommunication- History, Telephone, Telegraph, Radio/TV, Computer Communication • Development of telecommunication in India • Present Scenario • Role of Telecommunication Regulatory Authority of India (TRAI)			
3.	**Engineering of Telecommunication**	• Basics of traffic engineering for Telecommunication • Development of Telecommunication • Data and signal- Digital and Analogue data, Digital and Analogue signal, Carrier signals • Need of Modulation- Frequency, Spectrum and Bandwidth. • Data encoding methods- Digital to Analogue and Analogue to Digital • Modem and its type			

| 4. | **Network and Networking** | • Concept of Networking Definition of Networking
• Network components
• Switching Networking- Circuit Switching and Packet Switching
• Integrated Service Digital Network (ISDN)
• Public Switched Telephone Systems
• Mobile Telephone Systems
• Type and Topologies of Computer Networks
• Internet Communication
• Communication Services (E-mail, Newsgroup and Teleconferencing)
   ➢ Resource Access Services (File Transfer Protocol - FTP) and Telnet
   ➢ Information Retrieval Services (WWW, Gopher, WAIS) | | | |

Reference

1. Forouzan, Behrouz A. (2001). Data Communication And Networking . New Delhi:Tata Mc Graw Hill
2. Held,Gilbert.(1998) Understanding Data Communications. New Delhi:Techmedia
3. Odom,Wendell. (2004) Computer Networking First Step. New Delhi:Pearson Education.
4. White,Curt M.(2007) Data Communication And Networking . Australia:Course Technology Cengage Learning.