CAPMJC610 (Computer Networks)

Course Outcomes:

After the completion of the course, the students will attain the ability to:

CO1: Recognise the structure of Data Communications System and its components and basics of Networking.

CO2: Explain the concepts of Network models (OSI and the TCP/ IP Reference models), functions of OSI Layers and different Protocols used in these Models.

CO3: Illustrate various Networking devices and their functions, Multiplexing, Switching Techniques, IP Addressing.

CO4: Compare different Transmission media, Flow control and Error Detection Techniques.

CAPMJC610 :	Computer Networks	
PWC	(Theory : 5 credits + Tutorial: 1 credit)	
Units	Topics to be covered	No. of hours
1	Introduction to Data Communication: Characteristics, Components, Transmission Modes. Introduction to Computer Network : Types of Network – LAN, WAN, MAN, Network Topologies: Star, Ring, Bus, Mesh, Introduction to Internet Overview of OSI Reference Model and TCP/IP Protocol suite	15
2	Characteristics of Physical Layer, Analog and Digital Signal, Multiplexing Techniques - FDM, TDM, Transmission Media, Switching Techniques: Circuit Switching, Packet Switching, Message Switching,	15
3	Connecting Devices- HUB, Switch, Bridge, Repeater, Router, Gateway and NIC Characteristics of Data Link Layer, Framing, Introduction to Flow and Error Control Characteristics of Network Layer, IP Addressing	10
4	Functionalities of Transport Layer, Session Layer, Presentation Layer and Application Layer. Protocols: Ethernet, TCP, IP, UDP, ARP, RARP, HTTP, SMTP, FTP, TELNET	10
	Tutorial	10
	TOTAL	60

Reading List

1. Forouzan Behrouz A. (2003). *Data Communication and Networking*, Tata Mc Graw Hill, New Delhi

2. Commerce Douglas E., (2004). *Computer Network and Internet*, Pearson Education, New Delhi

3. Lingana Fred Halsall and Kulkarni Gouda, (2007). *Computer Networking and the Internet*,

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