COURSE CODE :- C 7
COURSE TITLE :- DATA COMMUNICATION AND NETWORKING
CREDIT :- 4

Marks distribution
Full Marks: 15 (MSE) + 60 (ESE) = 75   Duration: 3 hrs   Pass Marks: 34
This paper consists of 50 marks and divided into two groups:
Group-A: Objective questions (Compulsory)   :   1 x 10 = 10
Group-B: descriptive questions (5 out of 8 questions)   :   10 x 5 = 50

Total =   60
       The questions must cover the entire syllabus with equal distribution of marks as far as practicable.

Module1: Basic network concepts, advantages and disadvantages of computer networks, types of networks-LAN, WAN, MAN LAN Technology**:** LAN architecture, Bus/Tree LAN, Ring & Star LANs Network topologies, Hardware requirement of a network, Network operating system.

Module 2: A communication model, communication tasks, three-layer approach to protocols, brief introduction to TCP/IP and OSI (brief function to different layers),

Module 3: Data Transmission: concept and terminology, analog and digital data transmission. Transmission impairments, Guided transmission media. Data encoding, digital data digital signal, digital data analog signal, analog data digital signal and analog data analog signal

Module 4: Data link control**:** flow control, error detection (CRC). Error control, High level data control (HDLC). Multiplexing.

Module 5: Circuit switching: switched network, circuit switching networks, switching concepts, Packet Switching: packet switching principals, congestion and control

Module 6: Ethernet:-Standard Ethernet and Fast Ethernet, CSMA, CSMA/CD, CSMA/CA, Token ring and FDDI.

Module 7: Bridges: Bridge operation, routing and bridges

Module 8: Network Security: Requirements, conventional encryption, public key encryption & digital signature. (No numerical related questions are to be asked

Books Recommended:

Data Communication and Networking: Tannenbaum
Data Communication and Networking: W. Stalling
Data Communication and Networking: Frozen

PRACTICAL: PERSONAL COMPUTER CONFIGURTION

Installation of operating system, introduction of hardware.

(DEPARTMENT OF INFORMATION TECHNOLOGY)