

Roll No.

Total No. of Questions : 08]

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Paper ID [EC503]

(Please fill this Paper ID in OMR Sheet)

M.Tech.

DATA COMMUNICATION NETWORKS (EC/ECE - 503)

Time : 03 Hours

Maximum Marks : 100

Instruction to Candidates:

- 1) Attempt any **Five** questions.
- 2) All questions carry equal marks.

- Q1)** (a) Discuss the various types of transmission media and compare them.
(b) Explain bit oriental and character oriental protocols in detail.
- Q2)** (a) Explain the time division multiplexing in detail.
(b) Compare circuit switching, message switching and pocket switching techniques.
- Q3)** (a) Explain the structure of taken ring with a suitable example.
(b) Compare the virtual circuit and datagram computer networks.
- Q4)** (a) List and describe the ATM n/w service models.
(b) Consider a LAN to which 10 host interfaces and three router interfaces are attached. Suppose all three LANs use class C addresses. The IP addresses for the 13 devices will be identical in which of the first 32 bits?
- Q5)** (a) Explain the concept of firewall in detail.
(b) Explain the different buyers of TCP/IP protocol.
- Q6)** (a) Compare the important features of UNIX and LINUX.
(b) Explain the CRC protocol for error detection.

- Q7)** (a) Compare and contrast the IPv4 and IPv6 header fields. Do they have any fields in common. Explain.
- (b) Discuss the various services provided by data link layer.

Q8) Write short notes on the following:

- (a) CSMA/ CD protocol.
- (b) Intrusion Detection Systems.