

M. Tech.

DATA COMMUNICATION NETWORKS

SUBJECT CODE : EC - 503

Paper ID : [E0563]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours

Maximum Marks : 100

Instruction to Candidates:

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

- Q1)** (a) List at least ten advantages of digital data communication over analog data communication.
- (b) Compare different transmission media on the basis of various transmission impairments.
- Q2)** (a) Explain the DTE-DCE interface and also discuss their popular standards.
- (b) Explain in brief.
- (i) Longitudinal redundancy check (LRC).
 - (ii) Cyclic redundancy check (CRC).
- Q3)** (a) Discuss the two methods data flow control across communication link.
- (b) Discuss bit oriented and character oriented protocols with example.
- Q4)** (a) Compare the FDM & TDM.
- (b) Discuss the CSMA/CD MAC layer protocol in detail.
- Q5)** (a) Differentiate between packet switching, message switching and circuit switching in detail.
- (b) What are the advantages of FDDI over a basic Token ring?
- Q6)** (a) What are functions of the data link layer?
- (b) What are functions of the network layer?

Q7) (a) What is the need of IPv6? Compare the IP addressing in IP, IPv4 and IPv6.

(b) Explain the ATM frame and its architecture.

Q8) (a) What do you understand mobile IP33N and Explain?

(b) Discuss how the privacy of network is maintained.

