

Roll No.

Total No. of Questions : 09]

Paper ID [CS206]

[Total No. of Pages : 02

(Please fill this Paper ID in OMR Sheet)

B.Tech. (Semester - 4th)

DATA COMMUNICATION (CS - 206)

Time : 3 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **compulsory**.
- 2) Attempt any **Four** questions from Section - B.
- 3) Attempt any **Two** questions from Section - C.

Section - A

Q1)

(10 × 2 = 20)

- a) Write critique of the ISO model.
- b) Write the concept of layer protocols and layer interfaces.
- c) List two advantages and two disadvantages of having international standards.
- d) A noiseless 4-kHz channel is sampled every 1 msec. What is the maximum data rate?
- e) How a simplex stop-and-wait protocol works?
- f) Differentiate between persistent and nonpersistent CSMA.
- g) How CDMA technology actually works?
- h) Write about Transparent Bridge working.
- i) What are attributes used for traffic control in frame relay?
- j) Differentiate between primary server and a secondary server.

Section - B

(4 × 5 = 20)

Q2) Explain TCP/IP reference model. Explain each layer.

Q3) An alternative to a LAN is simply a big time sharing system with terminals for all users. Give two advantages of a client-server system using a LAN.

Q4) Differentiate between Sliding window protocols and a 1-bit sliding window protocol.

Q5) Differentiate between Pure ALOHA and Slotted ALOHA using diagram.

Q6) Compare IEEE Standard 802.4 and 802.5.

Section - C

(2 × 10 = 20)

Q7) a) Compare between datagram and virtual circuit network.

b) Which are the policies that affect the congestion and how it could be prevented?

Q8) a) Are both UDP and IP unreliable to the same degree? Why or why not?

b) What are the three domains of the domain name space? Also explain the purpose of the inverse domain.

Q9) What are the two main parts of an E-mail? Describe the addressing system used by SMTP.