

Roll No.

Total No. of Questions : 07]

[Total No. of Pages : 02

Paper ID [B0215]

(Please fill this Paper ID in OMR Sheet)

BCA (Sem. - 4th)

COMPUTER NETWORKS (BC - 401)

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.

Section - A

Q1)

(10 × 2 = 20)

- a) A signal travels from point A to point B. At the point A, the signal power is 200 W. At the point B, the power is 170 W. What is the attenuation in decibels?
- b) What is the primary cause of signal loss in satellite communication?
- c) What is the role of address field in a packet traveling through a datagram network?
- d) List the advantages of layering as seen in TCP/IP architecture.
- e) Explain the difference between Telephone and leased line communication channels.
- f) What is the role of MAC Sub layer?
- g) Explain in brief the working of packet switching.
- h) What are the benefits of using fiber transmission?
- i) How you will manage flow control at Data Link layer level?
- j) What are the important properties of broadband communication channels?

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Section - B

 $(4 \times 10 = 40)$

- Q2)** (a) Draw a flow chart showing how asynchronous serial data can be sent from a port line using a software routine.
- (b) Given the data word 1010011010 and the divisor 10111 show the generation of codeword at the sender side and checking at the receiver side.
- Q3)** (a) The attenuation of a signal is -12Db. What is the final signal power if it was originally 4 W.
- (b) Write a detailed note on Circuit switching.
- Q4)** (a) Describe the role of DTE devices in communication.
- (b) What is the hamming distance for each of the following codes.
- (i) $d(10000,01000)$
 - (ii) $d(0000,0000)$
 - (iii) $d(10000,01000)$
 - (iv) $d(0000,0000)$
- Q5)** (a) Write a short note on Infrared Transmission.
- (b) Differentiate between HDLC & SDLC.
- Q6)** (a) Discuss the modes for propagating light along optical channels.
- (b) Discuss the basic Principles used in defining the OSI layers.
- Q7)** (a) Differentiate between Microwave and radio transmission.
- (b) Write a short note on CDMA Technology.

