Roll No.....

Total No. of Questions : 13] [Total No. of Pages : 02

J-3169[S-1025]

[2037]
BCA (Semester - 4th)
COMPUTER NETWORKS
(BCA - 401)

Time : 03 Hours **Maximum Marks : 75**

Instruction to Candidates:

1) Section - A is **compulsory.**
2) Attempt any **Nine** questions from Section - B.

Section - A

Q1) ***(15 x 2 = 30)***

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) How the TDM is different from FDM?

d) What is the role of address field in a packet traveling through a datagram network?

e) List the advantages of layering as seen in TCP/IP architecture.

f) What are major limitations of twisted-pair wire?

g) How is redundancy related to error detection and correction?

h) Explain the difference between Telephone and leased line communication channels.

i) Give examples of where star and ring topologies will be useful.

j) What is the role of MAC sub layer?

k) Explain in brief the working of packet switching.

1) What are the benefits of using fiber transmission?

P.T.O.

m) How you will manage flow control at Data Link layer level?

n) Why we need network reference models?

o) What are the important properties of broadband communication channels?

Section - B

(9 x 5 = 45)

Q2) Draw a flow chart showing how asynchronous serial data can be sent from a port line using a software routine.

Q3) Given the data word 1010011010 and the divisor 10111 show the generation of codeword at the sender side and checking at the receiver side.

Q4) Discuss the architecture of OSI Model.

Q5) The attenuation of a signal is -12Db. What is the final signal power if it was originally 4 W.

Q6) Write a detailed note on Circuit switching.

Q7) Describe the role of DTE devices in communication.

Q8) Write a short note on Infrared Transmission.

Q9) Differentiate between HDLC & SDLC.

Q10) Discuss the modes for propagating light along optical channels.

Q11) Discuss the basic principles used in defining the OSI layers.

Q12) Explain the use of hamming code for error detection with the help of suitable example.

Q13) Differentiate between Microwave and radio transmission.