Roll No. ....

Total No. of Questions : 09]

[Total No. of Pages : 02

B.Tech. (Sem. - 4th)
DATA COMMUNICATION

SUBJECT CODE : CS - 206

Paper ID : [A0460]

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

Time : 03 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) What are the different network topologies available?

b) Which method is used for error correction at Data Link Layer?

c) Which IEEE standard is used for wired and wireless LANs?

d) What devices will you like to use in a LAN to enable network security?

e) The channel allocation takes place at which layer of TCP/IP model?

f) What is use of Reverse ARP?

g) What is the use of flags in a TCP header?

h) In case I open two different websites from the same computer, is my source port no. and destination port no. going to be different? Explain.

i) What is the need of having a different IP address and a MAC address?

j) What is the need of subnet mask?

R-715

P.T.O.

Section - B

(4 × 5 = 20)

Q2) Suppose a machine is attached to several physical networks. Why does it need a different IP address for each attachment?

Q3) Explain the working of sliding window protocol with the help of an example.

Q4) Explain in detail the purpose of each layer of TCP/IP model. Is OSI model used in practice.

Q5) What is the role of subnetting? For a given network with 1000 total users, where each set of 256 users have different locations, which class of network and subnetting will be most suitable?

Q6) How does address resolution takes place at the transport layer? Why is name resolution important?

Section - C

(2 × 10 = 20)

Q7) What is the mail use of multiplexing? Explain various ways in which multiplexing can be done.

Q8) What is the use of DNS protocol? What will happen in case DNS protocol is not present in the TCP/IP model?

Q9) Explain the different causes of congestion in any network. Explain any one congestion control algorithm that can be used for detection and prevention of congestion.

□□□□