

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

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 Hrs.

Max. 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

(10 *2 = 20 Marks)

Q1.

- a) What are the different network topologies available?
- b) Which method is used for error correction at Data Link Layer?
- c) Which IEEE, 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?

SECTION - B

(4*5 = 20 Marks)

- 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 Marks)

- 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.

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