

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) Explain as to how error detection at the data link level is achieved.
- b) What is a subnet mask is used for?
- c) What is the main use of DNS?
- d) Which MAC layer protocol is used by 802.11 WLAN?
- e) How is wired transmission different from wireless transmission?
- f) Which fields in an IP header uniquely identifies a connection (when viewed from Network)?
- g) Which layer provides End-to-end connectivity from host-to-host?
- h) What is the difference between simplex & half duplex?

- i) What is the difference between baseband and broad band cables?
- j) IP defines how many bits for representing an Ip and MAC address?

SECTION - B

(4*5 = 20 Marks)

- Q2. How is shortest path found by a static routing algorithm? Which metric is considered for deciding routing path in case of most of the routing algorithms and why?
- Q3. How is TCP and UDP different? Which protocol amongst two is more favorable for real time applications and why?
- Q4. What are the various transmission media available? State advantages and disadvantages of each.
- Q5. Explain different methods of error detection and error correction. Which method requires more number of bits and why?
- Q6. Why is multiple access required in LAN technologies? Compare FDM, TDM and SDM in terms of the ability to handle groups of stations.

SECTION - C

(2*10 = 20 Marks)

- Q7. If the size of a window is 3 bits, how many packets can be sent using Sliding Window protocol? Explain your answer. Explain the factors which will Determine the length of the sliding window.
- Q8. What are the various issues involved in IEEE 802.11 Wireless Networks? Why are they not so reliable networks?

Q9. Explain how the DNS allows a large number of DNS lookups to be processed. Which protocol is used by DNS in TCP/IP protocol stack and why?

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