

BT-5/DX

COMPUTER NETWORKS

Paper : CSE-303

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt *five* questions in all, selecting at least *one* question from each unit. All questions carry equal marks.

UNIT-I

1. (a) Explain the basis of having layered architecture. 9
(b) Describe Manchester and Differential Manchester Encoding with examples. 6
2. (a) What is a Socket? What are the APIs available for socket programming? 5
(b) Explain the working of SNMP. 10

UNIT-II

3. (a) Describe frame format of IEEE 802.3 and explain various fields. 6
(b) Describe IEEE 802.11 distribution and intra-cell services. 9
4. (a) Draw the PPP phase diagram giving a typical scenario. 9
(b) Give the differences between p-persistent, 1-persistent and non-persistent CSMA - CD. 6

UNIT-III

5. (a) What are different traffic management techniques available in packet switching networks? 7
(b) Explain with the help of an example Dijkstra's algorithm as applied to Computer Networks. 8
6. (a) What do you mean by Quality of service? What does it signify? Discuss some QoS parameters. 7
(b) What is the difference between end-to-end delay and packet jitter? What are the causes of packet jitter? 8

UNIT-IV

7. (a) Discuss TCP timer management specific to Retransmissions and RTT effects. 6
(b) Describe the IPv6 header and explain salient features of this protocol and advantages over IPv4. 9
8. (a) What is ARP? Why is an ARP query sent within a broadcast frame? Why is an ARP response sent within a frame with a specific destination MAC address? 7
(b) TCP congestion control has four key pieces: self clocking, slow start phase, congestion avoidance and fast retransmit/recovery. Explain what the role of each piece is, and how they are complementary to each other in terms of functionality. 8