35114

### BT - 5 / D-19
### COMPUTER NETWORKS
### Paper–CSE-303 N

Time allowed : 3 hours]        [Maximum marks : 75

Note:- Attempt any five questions selecting at least one question from each unit.

### Unit–I

1. (a) Explain the advantages of having layered architecture of computer networks. What are interfaces and services here?    9

   (b) Describe the terms attenuation, distortion, noise and bandwidth.    6

2. (a) What are different network topologies?    5

   (b) Explain the terms ATM and ISDN.    10

### Unit–II

3. (a) Describe the terms reservation, polling and multiple access.    6

   (b) Describe frame format of IEEE 802.3 and explain various fields.    9

4. (a) What are the differences between pure and slotted aloha?    6

   (b) What do you mean by sliding protocol? Explain its working in detail.    9

### Unit–III

5. (a) What is a subnet? How to identify its address? Will this address be same as the network address? Discuss your answer with clear example.    10

   (b) Explain with the help of an example Dijkstra's algorithm as applied to computing shortest path in a network.    5

6. (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?    10

   (b) Discuss any two different unicast and multicast routing protocols.    5

### Unit–IV

7. (a) Discuss TCP congestion control algorithm along with a suitable figure.    8

   (b) What is cryptography? Explain security protocols used in internet.    7

8. (a) Describe the IPv6 header and explain salient features of this protocol.    8

   (b) What do you mean by quality of service? What does it signify? Discuss some QoS parameters.    7