



- N.B. : (1) Question No. 1 is are compulsory.
(2) Attempt any **three** questions out of **remaining** questions.
(3) Total 4 questions **need** to be solved.

1. (a) Compare circuit switched and packet switched networks. 5
(b) What is a network? What are its goals and applications? 5
(c) Differentiate between TCP and UDP. 5
(d) Explain framing in Data link Layer. 5
2. (a) What is OSI modes? Give the function and services of each layer. 10
(b) Explain HDLC protocol along with its different frame structure. 10
3. (a) Explain CSMA/CD protocol. 10
(b) Describe about the different Guided transmission Medias. 10
4. (a) Explain the following with example :— 10
(i) Repeater (iv) Switches
(ii) Hubs (v) Router.
(iii) Bridges
(b) What is Ip addressiing? Explain IPv₄ datagram format? 10
5. (a) What is Congestion and what are the causes of congestion? Explain Token bucket algorithm of Congestion Control? 10
(b) Explain TCP segment header format. 10
6. Explain any four :— 20
(a) Compare LAN, WAN, MAN.
(b) Network Topologies.
(c) PSTN.
(d) Berkely sockets.
(e) Sliding window protocol.