

08/06/15

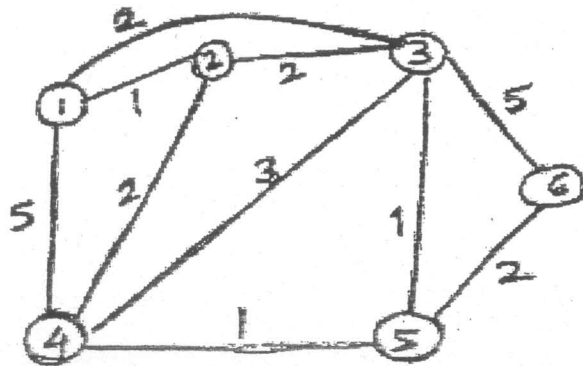
Q.P. Code : 8741

(3 Hours)

[Total Marks : 100

- N.B:
- (1) Question no.1 is compulsory
 - (2) Attempt any four questions out of remaining six questions
 - (3) Illustrate answers with sketches wherever required
 - (4) Figures to the right indicate marks.

1. (a) Explain bit and byte stuffing 5
 (b) What is collision and broadcast domain. How can they be reduced ? 5
 (c) Explain looping problem in bridge LAN. How to solve it. 5
 (d) Compare circuit switching and packet switching. 5
2. (a) Explain the ARP and RARP protocols in detail. 10
 (b) What is exterior and interior routing ? Explain in brief distance vector routing and Link state routing. 10
3. (a) Draw an IP datagram header and explain the function of every field. 10
 (b) With neat diagram explain sliding window flow control. 10
4. (a) Explain the ISO-OSI network model and discuss the functions of each layer. 10
 (b) Explain the M/M/I Model of queuing theory. 10
5. (a) Explain HDLC frame format. Describe configuration and response modes supported by HDLC protocol. Differentiate between HDLC and PPP protocols. 10
 (b) Explain the meaning of various fields in the TCP header. 10
6. (a) Find the shortest path between the source node 1 to all other nodes for the network given below using Dijkstra's algorithm. Also draw the shortest path tree from node 1 to all other nodes. 10



Q.P. Code : 8741

2

(b) Explain classful addressing in detail.

10

7. Write short notes on :

- (a) IEEE 802.3 standards.
- (b) ICMP
- (c) PAP and CHAP

20