

Con. 9651-13.

LJ-14258

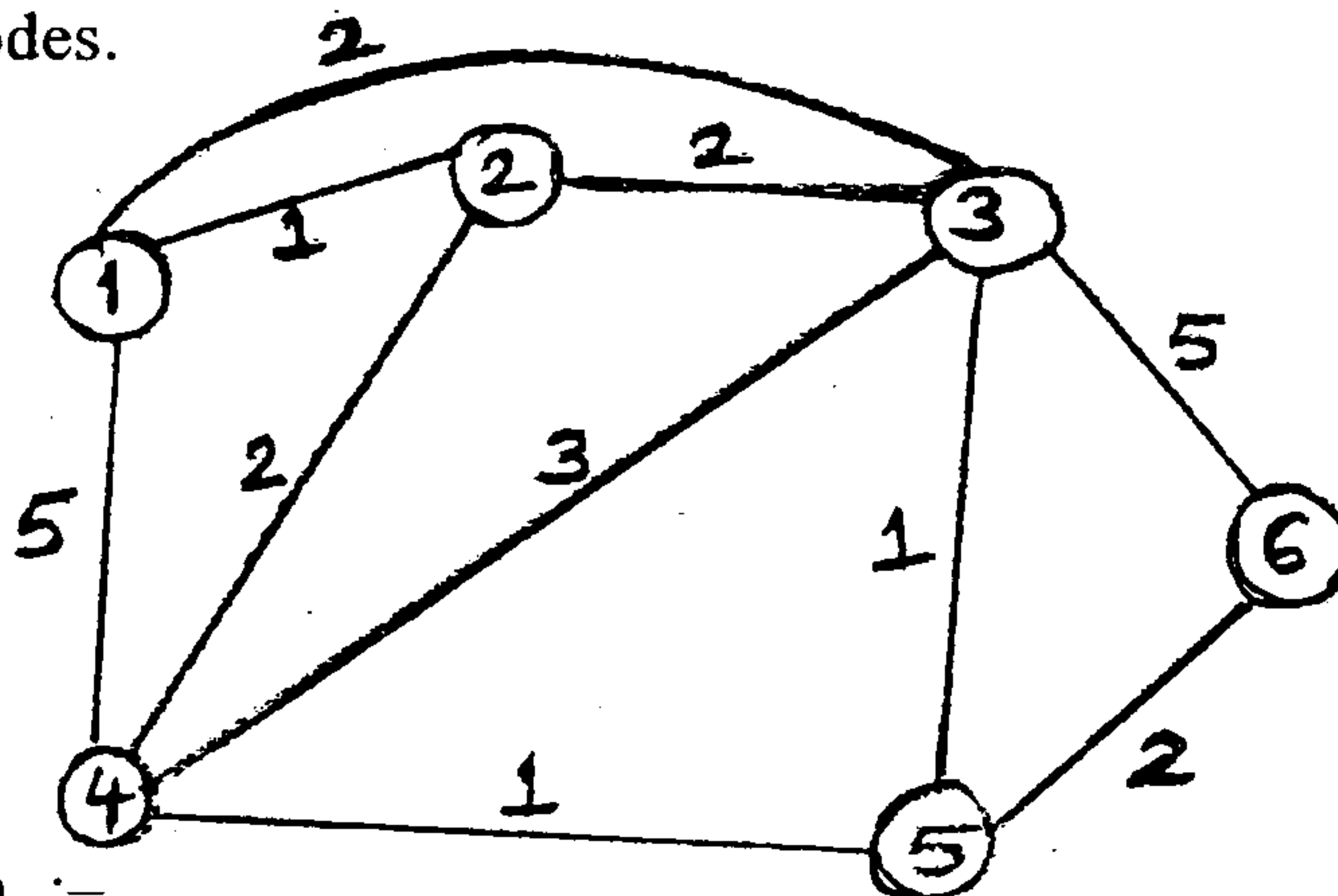
(REVISED COURSE)

(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 the difference between a data link layer delivery and a network layer delivery. 5
 (b) Differentiate between Circuit switching and Packet switching. 5
 (c) Why do you require a limit on the minimum size of Ethernet frame? 5
 (d) Explain ALOHA and slotted ALOHA. 5
2. (a) What does the term error control mean in data link layer? With neat diagram explain Go back N and selective repeat ARQ protocols. Compare their merits and demerits. 10
 (b) Explain OSI model and explain the process of data encapsulation in detail. 10
3. (a) Explain in detail HDLC protocol with all the frame types supported by HDLC. Differentiate between HDLC and PPP protocols. 10
 (b) Discuss various scheduling medium access control techniques. 10
4. (a) What is exterior and interior routing? Explain in brief Distance vector routing and Link state routing. 10
 (b) Write a note on IEEE 802.3 Standard in detail. 10
5. (a) Explain fragmentation and the fields related to the fragmentation in the IP datagram header. Discuss why IPV4 protocol needs to fragment some packets. 10
 (b) Discuss Queuing System classification. Explain M/M/I queuing system. 10
6. (a) Explain the meaning of various fields in the TCP header format. 10
 (b) 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



7. Write short notes on :-

- (a) Private IPV4 addresses
- (b) Looping in Distance Vector routing protocol
- (c) DHCP and RARP.

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