Roll No. .....

TCS–703

B. TECH. (SEVENTH SEMESTER)
MID SEMESTER EXAMINATION, Oct., 2022

COMPUTER NETWORKS—II

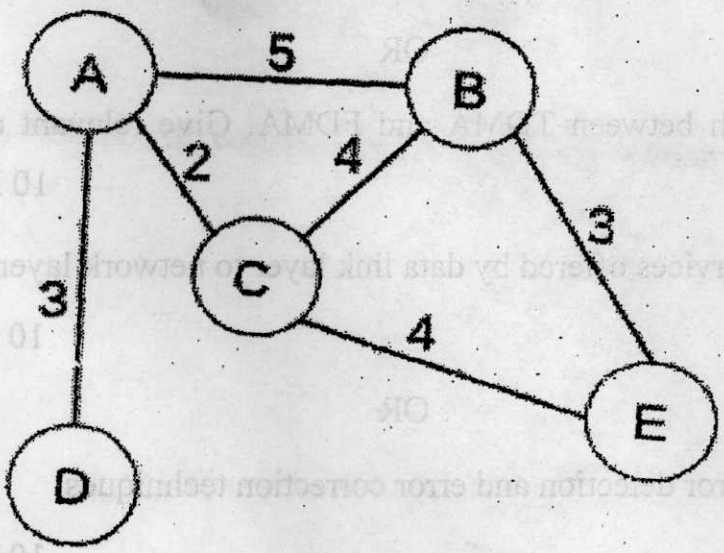
Time : 1½ Hours

Maximum Marks : 50

Note : (i) Answer all the questions by choosing any ***one*** of the sub-questions.

(ii) Each sub-question carries 10 marks.

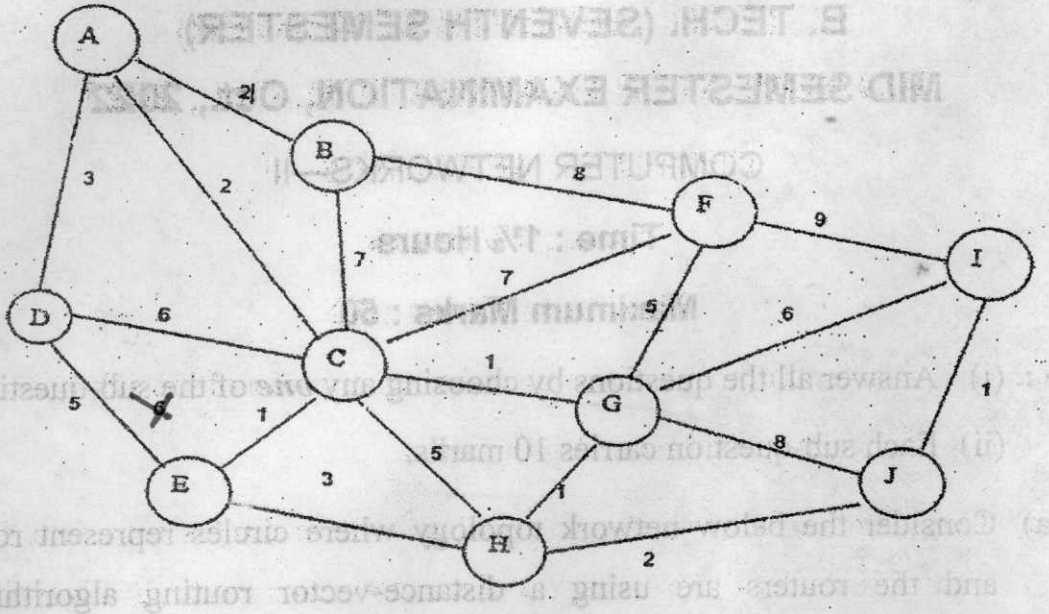
1. (a) Consider the below network topology where circles represent routers and the routers are using a distance-vector routing algorithm to determine the least cost routes to all other router : 10 Marks (CO1)



P. T. O.

OR

(b) Consider the following network. With the indication link costs, use LS algorithm to compute the shortest path from 'A' to all network nodes. Show the result in the tabular format. 10 Marks (CO1)



2. (a) Explain all the protocols briefly RIP, OSPF and BGP. 10 Marks (CO2)

OR

(b) Distinguish between TDMA and FDMA. Give relevant diagrams and examples. 10 Marks (CO2)

3. (a) Discuss services offered by data link layer to network layer. 10 Marks (CO2)

OR

(b) Explain error detection and error correction techniques. 10 Marks (CO2)

4. (a) Define Cyclic Redundancy Check. Verify the given data are valid or not using modulo division : 10 Marks (CO1)

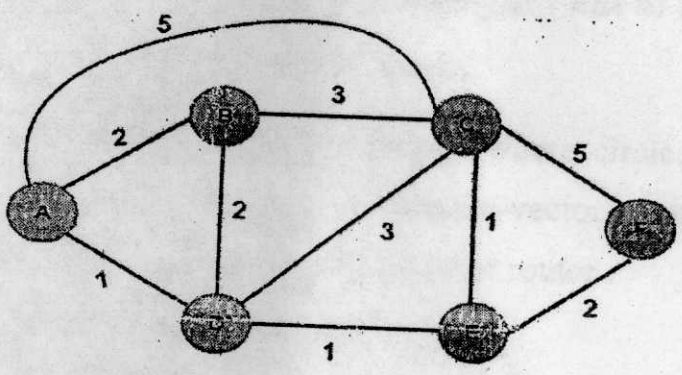
Data word to be sent – 1001

Key – 1101

OR

(b) Explain the MAC Protocols. State the difference between Slotted ALOHA and Pure ALOHA. 10 Marks (CO1)

5. (a) Consider the following network. With the indication link costs, use LS algorithm to compute the shortest path from 'A' to all network nodes. Show the result in the tabular format. 10 Marks (CO2)



OR

(b) Explain CSMA with collision detection and collision avoidance. 10 Marks (CO2)