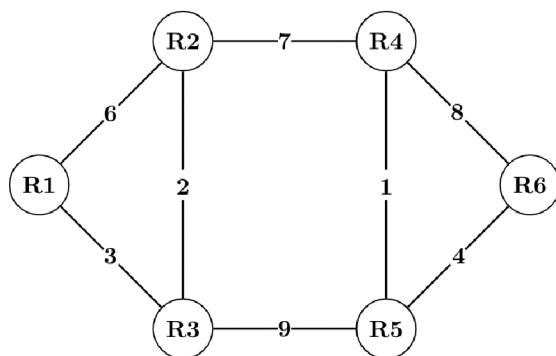


8. (a) Write down the principles of congestion control. 5

(b) Consider a network with 6 routers R1 to R6 connected with links having weights as shown in the following diagram :



Find the shortest path from R1 to R6 using routing algorithm. Explain all the steps of routing algorithm. 10

No. of Printed Pages : 04

Roll No.

18E3

B. Tech. EXAMINATION, 2022

(Fifth Semester)

(C. Scheme) (Main & Re-appear)

(CSE)

CSE305C

COMPUTER NETWORKS

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. (a) Define Computer Networks. Give different types of Networks giving example of each. 8
(b) Name and explain the layer which is responsible for token management. 7
2. (a) Differentiate between the following : 8
(i) Connection-less and Connection oriented communication
(ii) Star and Ring topology.
(b) What are the reasons for using layered protocols ? 7

Unit II

3. Name the layers of TCP/IP and give functionality of each layer. 15
4. (a) A classless address is given as 167.199.170.82/27. Find the (i) number of network addresses (ii) first address (iii) last address. 3

M-18E3

2

- (b) What is the importance of sequence number in TCP and why is it required ? 7
- (c) Explain DNS. Which layer protocol is DNS ? 5

Unit III

5. Explain CSMA/CD medium access sublayer protocol in detail. How is it different from CSMA/CA ? 15
6. (a) Why collision is an issue in random access protocol but not in controlled access protocols ? Give reasons. 8
(b) Explain the working of Token passing in detail. 7

Unit IV

7. (a) Explain the working of DQDB. 10
(b) Explain class of service. 5

(5-N22-23/17) M-18E3

3

P.T.O.