CBCS SCHEME

USN | | | | | | | | | | |

16/17SCS22

Second Semester M.Tech. Degree Examination, June/July 2019
Advances in Computer Networks

Time: 3 hrs. Max. Marks: 80

Note: ***Answer FIVE full questions, choosing one full question from each module.***

Module-1

1 a. With a neat diagram, explain de-multiple-xing in frame and network layers. **(08 Marks)**

b. Describe the functions of TCP/IP layers. **(08 Marks)**

OR

2 a. Explain the performance metrics bandwidth X delay and RTT. What is the time taken to send a file of size 'L' MB over a 'R' Mbps link? **(08 Marks)**

b. What are the three roles served by the sliding window protocol? Justify the answers. **(08 Marks)**

Module-2

3 a. Give the details of forwarding tables used in datagram and virtual circuit switching. Illustrate source routing with a diagram. **(10 Marks)**

b. Write the spanning tree algorithm used in LAN bridges. **(06 Marks)**

OR

4 a. What is CIDR? What is the aggregated route of the following routes : X.Y.128/24, X.Y.129/24, X.Y.130/24 and X.Y.135/24? **(08 Marks)**

b. Show IPv6 header and describe the significance of various fields. **(08 Marks)**

Module-3

5 a. Discuss count to infinity problem and the solutions. **(08 Marks)**

b. Using the Fig. Q5 (b), illustrate link state routing algorithm at the router D. **(08 Marks)**

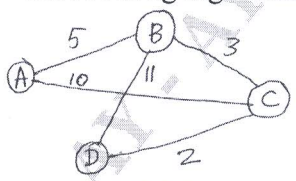

Fig. Q5 (b)

OR

6 a. Give an overview of mobile IP operation. **(08 Marks)**

b. Explain four key BGP characteristics. **(08 Marks)**

Module-4

7 a. Explain TCP header and describe the significance of various fields. **(10 Marks)**

b. How TCP timeout is estimated? **(06 Marks)**

OR

8 a. Outline TCP network Congestion control algorithm. What are the schemes for congestion avoidance? **(10 Marks)**

b. Describe TCP connection setup and fear down procedures. **(06 Marks)**

Module-5

9 a. Describe domain name resolution scheme. Describe A, MX and NS record types. **(08 Marks)**

b. Describe web application architecture. **(08 Marks)**

OR

10 a. Write a note on: (i) WFQ (ii) RED. **(08 Marks)**

b. Explain SNMP MIB and the operations. **(08 Marks)**

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