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10CS64

Sixth Semester B.E. Degree Examination, June/July 2017
Computer Networks – II

Time: 3 hrs.

Max. Marks: 100

**Note: Answer any FIVE full questions, selecting
atleast TWO questions from each part.**

PART – A

- 1 a. Why is packet switching more suitable than message switching for interactive applications? Compare the delays in datagram packet switching and message switching. (06 Marks)
- b. Define routing and forwarding. What are the goals of a routing algorithm? Discuss about flooding. (06 Marks)
- c. Develop an algorithm to find shortest paths from a node to all nodes of a graph. Determine shortest path from node five (5) to other nodes in a given graph. Fig.Q1(c). (08 Marks)

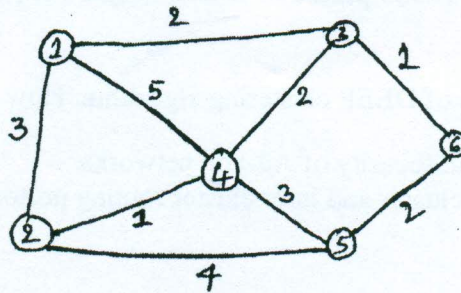


Fig.Q1(c)

- 2 a. Explain fair queuing for the traffic management at the packet level. Deduce formula for calculating finish tags for fair and weighted fair queuing. (06 Marks)
 - b. Write note on : i) admission control ii) traffic shaping. (06 Marks)
 - c. With a flowchart explain the function of leaky bucket algorithm. How dual leaky bucket principle works? (08 Marks)
- 3 a. How subnet addressing helps IP addressing? For an IP address 211.212.202.101/28 find the subnet address and range of IP addresses. (06 Marks)
 - b. Explain how migration from IPV4 to IPV6 is done. (06 Marks)
 - c. With a neat diagram give the purpose of each component of IPV4 header. Which are the five classes of IP addresses? Where are those addresses used? (08 Marks)
- 4 a. Give the general structure of TCP segment and write the purpose of each element in it. (06 Marks)
 - b. Explain the steps involved in mobile IP routing. (06 Marks)
 - c. Show how TCP connection is established using three way handshaking? Why unique initial sequence number is needed for each new connection? (08 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.



PART – B

- 5 a. Explain how recursive and iterative mapping of IP addresses are done in DNS servers. (06 Marks)
b. Briefly explain the steps of DES algorithm. (06 Marks)
c. Which are the types of attacks that can occur on an internet infrastructure? Explain. (08 Marks)
- 6 a. Give the overview of the integrated services QoS. (06 Marks)
b. Explain MPLS. Which are the additional capabilities added to IP network by MPLS. (06 Marks)
c. What is a VPN? How remote – access and site – to – site VPN works? (08 Marks)
- 7 a. Explain Lempel – Ziv and run-length encoding. Give examples. (06 Marks)
b. Give the overview of SIP. (06 Marks)
c. Discuss about H.323 protocol. With a diagram explain H.323 connection. (08 Marks)
- 8 a. Give the steps of DEEP clustering algorithm. How it differs from other clustering protocols? (06 Marks)
b. Write a note on security of Ad-hoc networks. (06 Marks)
c. Explain intra-cluster and inter cluster routing protocols. (08 Marks)
