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10CS/IS64

**Sixth Semester B.E. Degree Examination, Dec.2015/Jan.2016**  
**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. Differentiate between connection oriented and connectionless services. (04 Marks)  
 b. Define routing and its goals. (06 Marks)  
 c. Explain Dijkstra's algorithm. Consider the network given below in Fig. 1(c). Use the Dijkstra's algorithm to find shortest paths from node 4 to other nodes. (10 Marks)

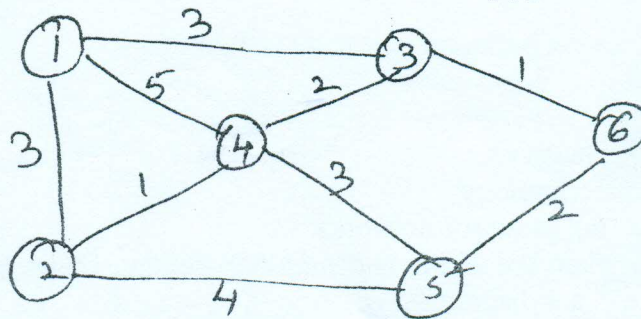


Fig.Q1(c)

- 2 a. Explain the FIFO and priority queue scheduling for managing traffic at flow level. (10 Marks)  
 b. Define congestion control with graph. Explain the leaky bucket algorithm for policing the traffic at flow level. (10 Marks)
- 3 a. Explain the IP address classification. Identify the following IP address to which class they belong to :  
 i) 200.58.20.165  
 ii) 128.167.23.20  
 iii) 16.196.128.50  
 iv) 150.156.10.10. (07 Marks)  
 b. A host in an organization has an IP address 150.32.64.34 and subnet mask 255.255.240.0. What is the address of this subnet? (06 Marks)  
 c. Give the format of IPv6 basic header. Compare IPv6 with IPv4. (07 Marks)
- 4 a. Write a note on :  
 i) IGMP protocol  
 ii) Mobile IP. (10 Marks)  
 b. Explain the three way handshake for establishing a TCP connection. (06 Marks)  
 c. Write a short note on routing information protocol. (04 Marks)

**PART – B**

- 5 a. Explain the routing table poisoning and denial –of–service attacks. (08 Marks)  
b. Define network management and explain SNMP and SNMP messages. (08 Marks)  
c. Differentiate between DES and RSA. (04 Marks)
- 6 a. Define MPLS. Explain its operation. (06 Marks)  
b. Explain the classification of resource allocation schemes. (06 Marks)  
c. With a neat diagram, explain the differentiated services QoS. (08 Marks)
- 7 a. Briefly explain MPEG standards and frame types for compression. (06 Marks)  
b. With a neat diagram, explain the H.323 components and list the steps in signaling. (06 Marks)  
c. Explain session initiation protocol (SIP) in detail. (08 Marks)
- 8 a. Write short notes on :  
i) Zigbee technology  
ii) Clustering in sensor networks. (08 Marks)  
b. Briefly explain the direct and multihop routing of intra-cluster routing protocol, with the help of relevant diagrams. (06 Marks)  
c. Explain sensor node structure with relevant figure. (06 Marks)

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