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10CS64

**Sixth Semester B.E. Degree Examination, Dec.2016/Jan.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. What is virtual-circuit packet switching? Explain. (06 Marks)  
 b. List and explain the goals of routing algorithms. (06 Marks)  
 c. Explain Bellman-Ford algorithm with example. (08 Marks)
- 2 a. Describe the FIFO and priority queues. (06 Marks)  
 b. What is weighted fair queuing? Explain. (06 Marks)  
 c. Explain Dijkstra's algorithm. Find the shortest path for the below network using Dijkstra's algorithm. (08 Marks)

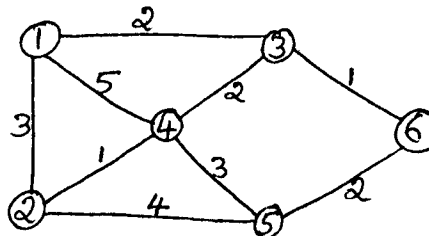


Fig. Q2(c)

- 3 a. Explain TCP/IP architecture with neat diagram. (10 Marks)  
 b. Describe the IPV6 header format with neat diagram. (10 Marks)
- 4 a. What is OSPF? Explain OSPF operations with aid of diagram. (10 Marks)  
 b. Explain multicast routing with example. (10 Marks)

**PART – B**

- 5 a. What is the purpose of network management? Explain the characterization of network management. (06 Marks)  
 b. Consider a plaintext message  $m = 9$ , get the cipher-text message by using RSA algorithm. Assume that  $a = 3$ ,  $b = 11$ . Also find the public and private keys. (06 Marks)  
 c. What is DNS? Also explain the domain name space and DNS message format. (08 Marks)
- 6 a. Explain the queuing model of leaky – bucket traffic shaping algorithm. (06 Marks)  
 b. Give the significance of differentiated services of QoS. (06 Marks)  
 c. What are VPNs? Explain the types of VPNs and benefits of VPNs. (08 Marks)
- 7 a. What is signal sampling? Explain the sampling process with the types of signal samplings. (06 Marks)  
 b. Explain the SIP components with neat diagrams. (06 Marks)  
 c. Explain the different lossless compression methods with example. (08 Marks)
- 8 a. Explain the different table driven routing protocols used in Ad-hoc networks. (10 Marks)  
 b. Explain DEEP clustering protocol algorithm. (10 Marks)

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2. Any revealing of identification, appeal to evaluator and/or equations written eg. 42+8 = 50, will be treated as malpractice.