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**Sixth Semester B.E. Degree Examination, December 2012**  
**Computer Networks – II**

Time: 3 hrs.

Max. Marks:100

**Note: Answer FIVE full questions, selecting  
at least TWO questions from each part.**

**PART – A**

- 1 a. Explain and derive delays in datagram packet switching and compare it with message switching. (10 Marks)
- b. Consider the network given below in Fig.Q.1(b). Use Dijkstra's algorithm to find shorted paths from source node 5 to all other destination nodes. Find the shortest path tree from node 5 to other nodes. (10 Marks)

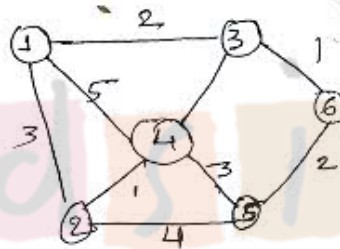


Fig.Q.1(b)

- 2 a. Explain Fair queuing and weighted fair queuing mechanism of traffic management at the packet level. (10 Marks)
- b. A host in on organization has on IP address 150.32.64.34 and subnet mask 255.255.240.0. What is the address of the subnet? What is the range of IP addresses that a host can have on this subnet? (10 Marks)
- 3 a. Explain IPv6 basic header format. (10 Marks)
- b. Explain OSPF common header fields and also OSPF hello packet format. (10 Marks)
- 4 a. Explain BISDN reference model. (06 Marks)
- b. Explain ATM cell header format. (07 Marks)
- c. Briefly explain various QoS parameter and traffic descriptors with respect to ATM networks. (07 Marks)

## PART – B

- 5 a. Write a note on structure of management information. (08 Marks)  
b. Apply RSA and do the following:  
i) Suppose  $P = 5$ ,  $q = 11$  find  $e$  and  $d$ .  
ii) Encrypt the following to get the cipher texts  $P_1 = 18$ ,  $P_2 = 19$  and  $P_3 = 1$ .  
iii) Decrypt the ciphertexts obtained above. (12 Marks)
- 6 a. Explain VPN and its types based on tunneling. (07 Marks)  
b. Explain the various types of resource allocation schemes. (06 Marks)  
c. Write a note on overlay networks. (07 Marks)
- 7 a. Explain the session initiation protocol. (10 Marks)  
b. Explain Shannon's coding theorem in detail. (10 Marks)
- 8 a. Write a note on the types of attacks in Ad-hoc networks. (06 Marks)  
b. Differentiate between intracluster and intercluster protocols for WSN. (07 Marks)  
c. Write a short note on Zigbee technology. (07 Marks)

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