USN ☐☐☐☐☐☐☐☐☐☐

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)**
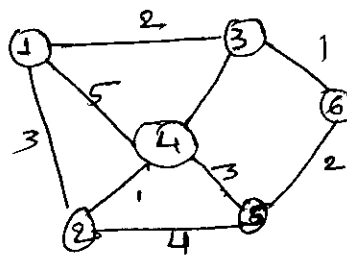

Fig.Q.1(b)

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 cirphertaxts 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 intracluster protocols for WSN.   (07 Marks)
    c.   Write a short note on Zigbec technology.   (07 Marks)

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