USN | | | | | | | | | | |

06CS64

Sixth Semester B.E. Degree Examination, Dec.2017/Jan.2018
Computer Networks – II

Time: 3 hrs. Max. Marks:100

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

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 – A

1 a. Distinguish between connectionless packet switching and virtual circuit packet switching. **(10 Marks)**

b. Consider the network in Fig. Q1(b). Use the Bellman – Ford algorithm to find the shortest paths from all the rodes to the destination node 2. **(10 Marks)**

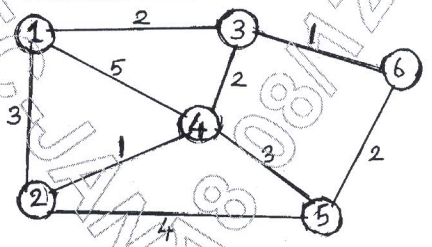

Fig.Q1(b)

2 a. Explain the techniques for closed-loop congestion control. **(08 Marks)**

b. A university has 150 LANs with 100 hosts in each LAN. Design an appropriate subnet addressing scheme if the university has one class B address. **(06 Marks)**

c. Explain the fragmentation and reassembly in IP network. **(06 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. With a neat diagram, explain the ATM cell header format. **(08 Marks)**

b. Briefly explain five ATM service categories. **(07 Marks)**

c. Explain the classical IP over ATM. **(05 Marks)**

PART – B

5 a. Explain the secret key and public key cryptographic systems, with relevant block diagrams. **(06 Marks)**

b. Apply RSA algorithm for the following :
i) Encrypt the plain tent P = 25 for p = 7, q = 11, e = 17
ii) Find the value of d and decrypt the ciphertext. **(06 Marks)**

c. What is SNMP? Discuss the interactions between the SNMP management station and SNMP agent. **(08 Marks)**

6 a. Explain the various types of resources allocation scheme by specifying the parameters for classification. **(08 Marks)**

b. List the benefits of creating VPNs. Explain VPN types. **(08 Marks)**

c. Write a short note on traffic engineering. **(04 Marks)**

7 a. Explain the session initiation protocol. **(10 Marks)**

b. Explain Shannon's coding theorem in detail. **(10 Marks)**

8 a. Explain the DSDV protocol for mobile Ad – HoC networks. **(10 Marks)**

b. Describe the DEEP clustering protocol for wireless sensor networks. **(10 Marks)**

* * * * *