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10CS64

Sixth Semester B.E. Degree Examination, Dec.2017/Jan.2018
Computer Network – 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 connection less and connection oriented packet switching network. (10 Marks)
- b. Discuss Bellman ford algorithm. Consider the network below and find the shortest path by applying Bellman ford algorithm to find both minimum cost from each node to destination node 6. (10 Marks)

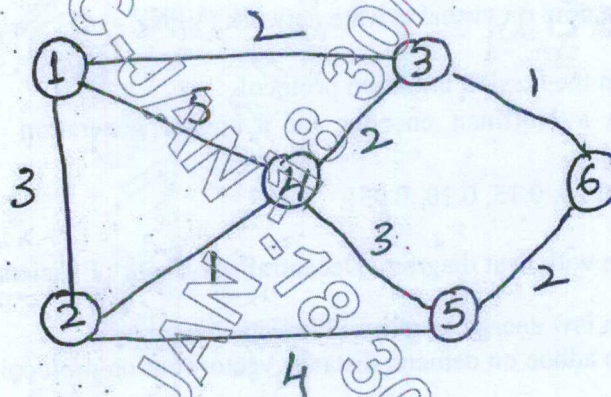


Fig. Q1 (b)

- 2 a. State the purpose of traffic management at flow level and discuss about congestion control algorithms. (08 Marks)
- b. What is fragmentation? What are the causes for fragmentation? (08 Marks)
- c. Identify the address class of the following input addresses:
 - (i) 14.6.12.1
 - (ii) 123.14.121.14
 - (iii) 197.125.1.1
 - (iv) 243.18.16.2
 (04 Marks)
- 3 a. Explain the format of IPV6 header. (07 Marks)
- b. What is the purpose of ICMP, what kind of network information does it carry? Explain. (08 Marks)
- c. How is checksum in TCP header computed? Explain with an example. (05 Marks)
- 4 a. Explain Open Shortest Path First (OSPF) with header format. (07 Marks)
- b. Write a note on network address translation. (05 Marks)
- c. Explain Broder Gate Way Protocol (BGP). (08 Marks)

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 - B

- 5 a. How does FTP work? Explain the connection establishment procedure between a client and a server. (07 Marks)
- b. Apply RSA algorithm for the following:
- (i) Encrypt the plain text
Plain text = 9
 $p = 3, q = 11, e = 3$
- (ii) Find the value of d and decrypt the cipher text. (08 Marks)
- c. Write a note on fire wall. (05 Marks)
- 6 a. Discuss the different resource allocation schemes. (06 Marks)
- b. What are the QoS methods in integrated service? Explain admission control and RSVP protocol. (07 Marks)
- c. Write a note on virtual private network (VPN). (07 Marks)
- 7 a. Explain the session initiation protocol. (10 Marks)
- b. Design a Huffman encoder for a source generation $\{a_1, a_2, a_3, a_4, a_5\}$ with respective probability. $\{0.50, 0.20, 0.15, 0.10, 0.05\}$ (10 Marks)
- 8 a. Explain with neat diagram, Decentralized Energy Efficient Propagation protocol (DEEP). (08 Marks)
- b. Explain low energy adaptive clustering hierarchy. (05 Marks)
- c. Explain adhoc on demand distance vector routing protocol. (07 Marks)
