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10CS64

Sixth Semester B.E. Degree Examination, June/July 2013
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. Differentiate between connection-oriented and connectionless services. (04 Marks)
b. Explain and derive delays in datagram packet switching. (08 Marks)
c. Define routing algorithm. Explain the Bellman-Ford algorithm with an example. (08 Marks)
- 2 a. Explain the FIFO and priority queue scheduling for managing traffic at packet level. (08 Marks)
b. Suppose that ATM cells arrive at a leaky bucket policer at times $t = 2, 3, 6, 9, 11, 16, 23, 24, 25, 26$ and 30 . Assume $I = 4$ and $L = 6$. Plot the bucket content and identify any non-conforming cells. (08 Marks)
c. Write a note on traffic management at the flow aggregate level. (04 Marks)
- 3 a. Explain the format of IPV4 format header. (08 Marks)
b. With a neat diagram, explain UDP datagram. (08 Marks)
c. Write a note on internet control message protocol (ICMP). (04 Marks)
- 4 a. With a neat diagram, explain the format of the TCP segment. (08 Marks)
b. Explain the Border Gateway Protocol (BGP). (08 Marks)
c. Write a note on Network Address Translation (NAT). (04 Marks)

PART – B

- 5 a. Explain the remote login protocols. (08 Marks)
b. Explain the RSA algorithm with an example. (08 Marks)
c. Write a note on firewalls. (04 Marks)
- 6 a. With a neat diagram, explain the integrated services QoS. (08 Marks)
b. Explain multiprotocol label switching (MPLS) operation and packet format. (08 Marks)
c. Write a note on virtual private networks. (04 Marks)
- 7 a. List and explain the compression methods without loss. (08 Marks)
b. With a neat diagram, explain the session initiation protocol (SIP). (08 Marks)
c. Write a note on real-time media transport protocols. (04 Marks)
- 8 a. Briefly explain the classification of routing protocol. (06 Marks)
b. Explain the DEEP clustering algorithm. (06 Marks)
c. Explain the intracluster and intercluster routing protocols. (08 Marks)

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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.