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06CS64

Sixth Semester B.E. Degree Examination, June 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. With examples, differentiate between datagram and virtual circuit packet switching. (06 Marks)
b. Define routing. With an example, explain the Bellman-Ford algorithm for shortest-path routing. (10 Marks)
c. Write a short note on ATM networks. (04 Marks)
- 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. What do you mean by tunneling? Briefly explain the changes from IPv4 to IPv6. (08 Marks)
b. With a neat diagram, explain three-way handshake for connection establishment in TCP. (08 Marks)
c. Write a short note on internet routing protocols. (04 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. Define network management. Discuss the interactions between the SNMP management station and SNMP agent. (08 Marks)
b. Explain the security attacks and security goals. (06 Marks)
c. Explain the Diffie-Hellman exchange for secret key generation. What are its weaknesses? (06 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 MPEG standards and frame types for compression. (06 Marks)
b. With an example, explain Huffman encoding for data compression (06 Marks)
c. Explain the different servers contained in SIP with its overview. (08 Marks)
- 8 a. List and explain the applications and features of ad-hoc networks. (07 Marks)
b. Explain the security vulnerabilities and security attacks in ad-hoc networks. (07 Marks)
c. With a neat diagram, explain sensor mode structure. (06 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.