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**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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