Seventh Semester B.E. Degree Examination, December 2010
Computer Communication Networks

Time: 3 hrs.

Max. Marks:100

Note: *Answer any FIVE full questions, selecting at least TWO questions from each part.*

PART – A

1. a. What are the levels of addresses that are used in an internet, employing the TCP/IP protocols? (10 Marks)
   b. What are different types of services provided by telephone networks? (06 Marks)
   c. Name the major components of a telephone network. (04 Marks)

2. a. Explain the stop-and-wait protocol, for noisy channels. (10 Marks)
   b. What are the three types of frames in HDLC protocol? Explain each of them briefly. (10 Marks)

3. a. Explain pure ALOHA protocol. (06 Marks)
   b. Pure ALOHA network transmits 200-bit frames on a shared channel of 200 Kbps. What is the throughput if the system produces :
      i) 1000 frames/sec   ii) 500 frames/sec   iii) 250 frames/sec? (04 Marks)
   c. Discuss the three controlled access methods. (10 Marks)

4. a. Explain the goals, MAC sub layer and physical layer of the fast Ethernet. (10 Marks)
   b. Explain briefly the baseband layer in the Bluetooth layers. (10 Marks)

PART – B

5. a. Explain briefly the three criteria of the transparent bridge. (10 Marks)
   b. Explain virtual LANs systems. (10 Marks)

6. a. Find the class of the following IP addresses:
      i)   237.14.2.1
      ii)   208.35.54.12
      iii) 129.14.6.8
      iv)   114.34.2.8 (04 Marks)
   b. What is NAT? How can NAT help in address depletion? (06 Marks)
   c. Explain IPV6 addresses. (10 Marks)

7. a. Explain the path vector routing, for an interdomain system. (10 Marks)
   b. Explain the Core-Based Tree (CBT). (10 Marks)

8. Write short notes on any TWO of the following : (20 Marks)
   a. UDP
   b. TCP
   c. DNS