B.Tech. VIth Semester (Main/Back) Examination, June-2010
Computer & IT
COMPUTER NETWORKS [6CS2 and 6IT2]

Time: 3 Hr.

[Total Marks: 80
Min. Passing Marks: 24]

Instructions to Candidates:

*Attempt any **five questions** selecting **one question** from **each unit**. All question carry equal marks. (sSchematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly. Units of quantities used calculated just be stated clearly.)*

Unit–I

Q.1 (a) Briefly explain services and protocols of layers of osi protocol hierarchy. [8]

(b) Explain major classes of guided media. What is the purpose of cladding in optical fiber? [8]

Or

Q.1 (a) Describe hardware and software issues in Internetworking. [8]

(b) Write short note on:

  (i) Internetworking devices

  (ii) Internet backbone.

Unit–II

Q.2 (a) Explain e-mail architecture along with its main components. [8]

(b) What is DNS? Why it is required? When a DNS server receives a request, what are the possible actions that it can take? [8]

Or

Q.2 (a) Describe the steps involved when a web Browser requests for and obtains a web page from a web server. Why HTTP is known as stateless protocol? [8]

(b) Write any for HTTP and FTP commands with syntax and suitable illustrations. [8]

Unit–III

Q.3   (a) Explain three multiplexing techniques. Distinguish between multilevel TDM. multiple shot TDM and pulse-stuffed TDM.   [8]

      (b) Differentiate between ports and sockets in context of TCP & ip protocols.   [8]

Or

Q.3   (a) Discuss broadlevel function of TCP. How does three way handshake for creating a TCP connection work?   [8]

      (b) What features make TCP reliable ? Explain the frame format and purpose of various fields of TCP packet format.   [8]

Unit–IV

Q.4   (a) Briefly describe subnetting and supernetting. How do they differ from a default mask in classfull addressing?   [8]

      (b) Briefly explain the following: [8]

         (i) NCP & LCP

         (ii) Link state routing

Or

Q.4   (a) Write a detailed note on tunnelling strategy and fragmentation.   [8]

      (b) Compare and contrast the fields of ip_v4 and ip_v6 datagram format.   [8]

Unit–V

Q.5   (a) What is SONET? Explain the functions of its various layers with suitable diagrams.   [8]

      (b) What is virtual tributary? What are its various types?   [8]

Or

Q.5   (a) Explain physical configuration of SONET devices> What is relationship between SONET and SDH?   [8]

      (b) What is relationship between STS signals and OC signals?   [8]