Reg. No. : | | | | | | | | | | | |

L 1400

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2008.

Sixth Semester

Information Technology

IF 361 — TCP/IP AND SOCKET PROGRAMMING

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Give the mechanism used by the TCP/IP protocol suite to overcome errors.

2. Define Slow Convergence problem.

3. In what way does TCP handle the problem of congestion at a link in the network?

4. Compare connection-oriented service with connectionless service.

5. What is TCB?

6. List the various timers used by TCP.

7. List the various types of sockets.

8. Give the syntax of the select() system call.

9. Write notes on the finger protocol.

10. List a few application protocols built using UDP.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the funtioning of ARP and RARP in detail. (9)

(ii) Compare IPV6 with IPV4. (7)

Or

(b) How does ICMP help in handling errors? State an example and explain with appropriate message formats. (16)

12. (a) (i) Explain the timeout and retransmission in TCP. (8)

(ii) Explain some problems encountered due to congestion. (8)

Or

(b) (i) Give the format of TCP header and explain the fields. (8)

(ii) Elaborate on the TCP performance problem. (8)

13. (a) Sketch the TCP state transition diagram and explain the states. (16)

Or

(b) Write notes on

(i) IP Fragmentation and Reassembly. (8)

(ii) User Datagram Protocol. (8)

14. (a) Explain the connection-oriented model of client server interaction, and the socket calls involved. (16)

Or

(b) Write a client/server socket program for daytime server, that return the current date and time, upon a request from the client. (16)

15. (a) Write notes on the following.

(i) FTP (8)

(ii) PING (8)

Or

(b) Implement a socket program that gets a line of input from the client and echoes it back to the client for a connectionless service. (16)