USN : _____ Course Code : 18CS72

Seventh Semester B.E. Semester End Examination, JANUARY_MARCH_2023

NETWORK PROGRAMMING

Time: 3 hrs. Max. Marks :100

Instructions :1. Answer any FIVE Full Questions selecting at least ONE Question from Each Unit.

	L	CO	PO	M

MODULE 1

1a. What is network protocol? With a neat block diagram explain the network application for client and server. [2] [1] [1] [8]

1b. Explain with a neat diagrams the following:
a. TCP connection establishment. b. TCP data transfer. c. TCP connection termination. [2] [1] [1] [12]

OR

2a. Explain with a neat block diagram the layers of Internet protocol suite. [2] [1] [1] [8]

2b. Develop a 'C' program to implement simple daytime client. [3] [1] [3] [12]

MODULE 2

3a. Outline the typical concurrent server with the help of pseudocode. [2] [2] [1] [8]

3b. Develop the 'C' program to demonstrate the TCP echo client: str_cli function [3] [2] [3] [12]

OR

4a. Demonstrate the status of client/ server after fork returns with a neat block diagram. [2] [2] [2] [8]

4b. Develop the pseudocode that returns the address family of a socket. [3] [2] [2] [12]

MODULE 3

5a. Explain the following functions of UDP socket:
a. recvfrom b. sendto [2] [2] [2] [8]

5b. Develop a 'C' program to demonstrate the UDP echo server: dg_echo function. [3] [2] [3] [12]

OR

6a. Explain the simple SCTP streaming echo client and server with a neat block diagram. [2] [2] [1] [8]

6b. Develop a 'C' program to demonstrate the UDP echo client: dg_cli function. [3] [2] [3] [12]

MODULE 4

7a. List and explain the numerous ways to start a daemon. [2] [3] [2] [8]

7b. With a neat block diagram explain IPv6 server on dual stack host serving IPv4 and IPv6 clients. [2] [3] [1] [12]

OR

8a. List and explain the actions on startup for syslogd Daemon. [2] [3] [1] [8]

8b. Explain the following with a neat block diagram:
a. inetd descriptors in child b. inetd descriptors after dup2 [2] [3] [1] [12]

MODULE 5

9a. Define unicasting, multicasting and broadcasting. Explain in brief each one of them with an example. [2] [3] [1] [8]

9b. Show with a neat block diagram, how UDP datagram can be applied for broadcasting. [2] [3] [1] [12]

OR

10a. Illustrate the scope of multicast addresses. [2] [3] [1] [8]

10b. What is NTP protocol. Explain the NTP packet format and definitions of each field of ntp.h header. [2] [3] [3] [12]