10/03/2023

USN : _____ Course Code : 18CS72

Seventh Semester B.E. MAKEUP Examination, MARCH_APRIL_2023

NETWORK PROGRAMMING

Time: 3 hrs. Max. Marks :100

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

MODULE 1

	L	CO	PO	M
1a. With a neat block diagram, explain the client and server communication on Local Area Network using TCP.	[2]	[1]	[1]	[8]
1b. Develop the 'C' program to implement simple daytime server.	[3]	[1]	[3]	[12]

OR

2a. What are wrapper functions? Develop the wrapper function for the following:
   a. Socket function
   b. Pthread_mutex_lock

[3] [1] [3] [8]

2b. With a neat sketch explain the TCP State Transition diagram.

[2] [1] [1] [12]

MODULE 2

3a. Illustrate the significance of socket functions for elementary TCP client/server with a neat block diagram.

[2] [2] [1] [8]

3b. Develop a 'C' program to demonstrate the TCP echo server: main function.

[3] [2] [3] [12]

OR

4a. Explain the following arguments of the socket function:
   a. Family
   b. Type
   c. Protocol

[2] [2] [1] [8]

4b. Compare the little-endian and big-endian byte ordering functions with a neat diagrams. Develop a 'C' program to determine host byte order.

[3] [2] [2] [12]

MODULE 3

5a. Illustrate the significance of socket functions for UDP and TCP client / server with a neat block diagram.

[2] [2] [1] [8]

5b. Develop the 'C' program to demonstrate the UDP echo server: main function and dg_echo function.

[3] [2] [3] [12]

OR

6a. Develop the 'C' program for dg_cli function that verifies returned socket address.

[3] [2] [3] [8]

6b. Develop the 'C' program to demonstrate the UDP echo client: main function and dg_cli function.

[3] [2] [3] [12]

MODULE 4

7a. With a function prototype explain the syslog Function.

[2] [3] [1] [8]

7b. Explain with a neat block diagram how the received IPv4 and IPv6 datagrams are processed depending on the type of receiving socket.

[2] [3] [1] [12]

OR

8a. What is daemon process. List out the numerous ways to start a daemon. Explain the significance of daemon_init function.

[2] [3] [1] [8]

8b. Explain with a neat block diagrams show how the client requests are processed depending on the address type and socket type.

[2] [3] [1] [12]

MODULE 5

9a. Differentiate between unicast and broadcast. Give appropriate example for each.

[2] [3] [1] [8]

9b. List and explain the routing protocols which makes use of multicasting.

[2] [3] [1] [12]

OR

10a. Make use of UDP datagram to understand unicasting.

[3] [3] [1] [8]

10b. Explain with a neat block diagram how IPv4 and IPv6 multicast addresses are mapped to Ethernet addresses.

[2] [3] [2] [12]