Date: 11/07/2023

Department: **Computer Engineering**

Class: **T.E.** Subject code:310247   Semester: **I**
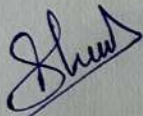Subject Name: **CNSL**   Examination scheme: **TW-25, OR-25**

Expt. No.	Problem Statement
A1	Setup a wired LAN using Layer 2 Switch. It includes preparation of cable, testing of cable using line tester, configuration machine using IP addresses, testing using PING utility and demonstrating the PING packets captured traces using Wireshark Packet Analyzer Tool.
A2	Setup a WAN which contains wired as well as wireless LAN by using a packet tracer tool. Demonstrate transfer of a packet from LAN 1 (wired LAN) to LAN2 (Wireless LAN).
A3	Write a program for error detection and correction for 7/8 bits ASCII codes using Hamming Codes or CRC.
A4	Write a program to simulate Go back N and Selective Repeat Modes of Sliding Window Protocol in Peer-to-Peer mode.
B1	Write a program to demonstrate Sub-netting and find Subnet masks.
B2	Write a program to implement Link state / Distance vector routing protocol to find suitable path for transmission
B3	Use packet Tracer tool for configuration of 3 router network using one of the following protocol RIP/OSPF/BGP.
B4	Write a program using TCP socket for wired network for following a. Say Hello to Each other b. File transfer c. Calculator
B5	Write a program using UDP Sockets to enable file transfer (Script, Text, Audio and Video one file each) between two machines.

C1	Write a program for DNS lookup. Given an IP address as input, it should return URL and vice-versa.
C2	Installing and configure DHCP server and write a program to install the software on remote machine.
C3	Study and Analyze the performance of HTTP, HTTPS and FTP protocol using Packet tracer tool.
C4	To study the SSL protocol by capturing the packets using Wireshark tool while visiting any SSL secured website (banking, e-commerce etc.).
C5	To study the IPsec (ESP and AH) protocol by capturing the packets using Wireshark tool.

Subject Coordinator

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