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**Experiment List**

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| **Assignment**  **No.** | **Title of the assignment** |
| 1. | Setup a wired LAN using Layer 2 Switch and then IP switch of minimum four computers. It includes preparation of cable, testing of cable using line tester, configuration machine using IP addresses, testing using PING utility and demonstrate the PING packets captured traces using Wireshark Packet Analyzer Tool. |
| 2 | Write a program for error detection and correction for 7/8 bits ASCII codes using **Hamming Codes**. Demonstrate the packets captured traces using Wireshark Packet Analyzer Tool for peer to peer mode. |
| 3 | Write a program for error detection and correction for 7/8 bits ASCII codes using **CRC**. Demonstrate the packets captured traces using Wireshark Packet Analyzer Tool for peer to peer mode. |
| 4 | Write a program to simulate **Go back N** Modes of Sliding Window  Protocol in peer to peer mode and demonstrate the packets captured traces using Wireshark  Packet Analyzer Tool for peer to peer mode. |
| 5 | Write a program to simulate **Selective Repeat** Modes of Sliding Window  Protocol in peer to peer mode and demonstrate the packets captured traces using Wireshark  Packet Analyzer Tool for peer to peer mode. |
| 6 | Write a program to demonstrate subletting and find the subnet masks. |
| 7 | Write a program using **TCP** socket **in C** for wired network for following  **a. Say Hello to Each other ( For all students)**  **b. File transfer ( For all students)**  **c. Calculator (Arithmetic) (50% students)**  Demonstrate the packets captured traces using Wireshark Packet Analyzer Tool for peer to peer mode. |
| 8 | Write a program using **TCP** socket **in C** wired network for following  **a. Say Hello to Each other ( For all students)**  **b. File transfer ( For all students)**  **c. Calculator (Trigonometry) (50% students)**  Demonstrate the packets captured traces using Wireshark Packet Analyzer Tool for peer to peer mode. |
| 9 | Write a program using **UDP** Sockets **in C** to enable **file transfer** (Script, Text, Audio and Video one file each) between two machines. Demonstrate the packets captured traces using Wireshark Packet Analyzer Tool for peer to peer mode. |
| 10 | Write a program to analyze following packet formats captured through Wireshark for wired network. 1. Ethernet 2. IP 3.TCP 4. UDP |
| 11 | Write a program for DNS lookup. Given an IP address input, it should return URL and vice versa. |
| 12 | Write a program using **TCP** sockets **in JAVA** for wired network to implement  **a. Peer to Peer Chat**  **b. Multiuser Chat**  Demonstrate the packets captured traces using Wireshark Packet Analyzer Tool for peer to peer mode. |
| 13 | Write a program using **UDP** sockets **in JAVA** for wired network to implement  **a. Peer to Peer Chat**  **b. Multiuser Chat**  Demonstrate the packets captured traces using Wireshark Packet Analyzer Tool for peer to peer mode. |
| 14 | Use network simulator **NS2** to implement:  a. Monitoring traffic for the given topology  b. Analysis of CSMA and Ethernet protocols  c. Network Routing: Shortest path routing, AODV.  d. Analysis of congestion control (TCP and UDP). |
| 15 | Configure RIP/OSPF/BGP using packet Tracer. |

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| *PREPARED BY* | *APPROVED BY* | *PAGE No.: 01 OF 01* |
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**MCOE/ACAD/ F/33/00/ 01.06.11**