TELECOMMUNICATION NETWORKS LAB

(Core Subject)

Course Code:	10B17EC671	Semester:	6th Semester, B. Tech (ECE)
Credits:	1	Contact Hours:	L-0, T-0,P-2

Course Objectives

The objectives are to make students familiar with fundamentals of networking at the data link layer and especially MAC layer.

Course Outcomes

After studying this course the students would gain enough knowledge to

1. Calculate the network throughput for various different multiple access protocols like ALOHA, CSMA, CSMA/CD etc.
2. Understand the basic concepts of token bus, token ring LAN.

List of Experiments

1. To calculate throughput of ALOHA protocol using LAN trainer and to compare with the theoretical results. Plot throughput vs. load.
2. To calculate throughput of CSMA protocol using LAN trainers and to compare with the theoretical results. Plot throughput vs. load.
3. To calculate throughput of CSMA/CD protocol using LAN trainers and to compare with the theoretical results. Plot throughput vs. load.
4. To calculate the throughput of token bus LAN with the variation of token holding time, delay, BER etc. Plot throughput vs. load.
5. To calculate the throughput of token ring LAN with the variation of token holding time, delay, error etc. Plot throughput vs. load.
6. To calculate the throughput of stop and wait protocol with the variation of delay, packet size etc at zero BER. Plot throughput vs. load.
7. To calculate the throughput of stop and wait protocol with the variation of delay, packet size etc at nonzero BER. Plot throughput vs. load.
8. To calculate the throughput of sliding window protocol with the variation of delay, packet size etc at zero BER. Plot throughput vs. load.
9. To calculate the throughput of sliding window protocol with the variation of delay, packet size etc at nonzero BER. Plot throughput vs. load.

10. Implementation of packet transmission.

Evaluation Scheme

1. Mid Sem. Evaluation	20 Marks
2. End Sem. Evaluation	20 Marks
3. Attendance	15 Marks
4. Class response	30 Marks
5. File	15 Marks
Total Marks	**100 Marks**

Text Books

- B. A. Forouzan: "Data Communications and Networking", Tata McGraw-Hill 4th Edition 2010.
- A. Tanenbaum: "Computer Networks", Pearson Education, 4th Edition.