



SIDDAGANGA INSTITUTE OF TECHNOLOGY, TUMKUR-03
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
NETWORK PROGRAMMING LAB (7CSL01)

Student Name:		USN:	Batch No:	Date:
Evaluation:				
Observation writing and File maintenance (10 Marks)	Clarity in concepts (05 Marks)	Implementation and execution of the program (10 Marks)	Viva (10 Marks)	Total (35 Marks)
Sl.No	Name of the Faculty In-Charge			Signature
1.				
2.				

Question No. B3

Simulate an Ethernet LAN using n nodes (6-10), change error rate and data rate and compare the throughput.

Pre-requisites:

Ethernet

Ethernet is the traditional technology for connecting wired local area networks (LANs), enabling devices to communicate with each other via a protocol. An Ethernet cable is used to connect one or more devices to the LAN.

Write a TCL(Tool command language) Script.

1. Declare a network simulator.
2. Create and open a tracefile(lab1.tr) and a Network animator(NAM trace) file in write mode which is used to store and display the output.
3. Create 6-10 nodes.
4. Create link between nodes.
5. Make LAN connection between nodes.
6. Set and vary error rate for different outputs.
7. Set UDP/TCP connection for source and destination.
8. Attach application layer protocol over UDP/TCP.
9. Define a 'finish' procedure.
 - o Dump all traces and close the files.
 - o Execute NAM animation file.
 - o Check the events in trace file.
 - o For all the events 'r' (r denotes received packets), count number of packets and size of the packet.
 - o Calculate and display the throughput for Ethernet connection.
10. Schedule the events.
11. Start network simulation.