**Lab-V**

**Network Simulator**

1.Simulate a three node point to point network with duplex links between them. Set queue size and vary the bandwidth. Calculate the network performance parameters like number of packets dropped, throughput, packet delivery ratio using AWK script and generate a graph using GNUPLOT.

2. Simulate a four node point to point network withthe links connected as follows: n0 - n2, n1 - n2 and n2 - n3. Apply TCP agent between n0 - n3 and UDP agent between n1 - n3. Apply relevant applications over TCP and UDP agents changing the parameter and determine the number of packets sent by TCP/UDP, number of packets dropped, delay, throughput, packet delivery ratio using AWK script and generate a graph using GNUPLOT.

3. Simulate the transmission of ping messages over a network topology consisting of 6 nodes and find the number of packets dropped due to congestion, throughput using AWK script and generate a graph using GNUPLOT. using AWK script and generate a graph using GNUPLOT.