SET 2

NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

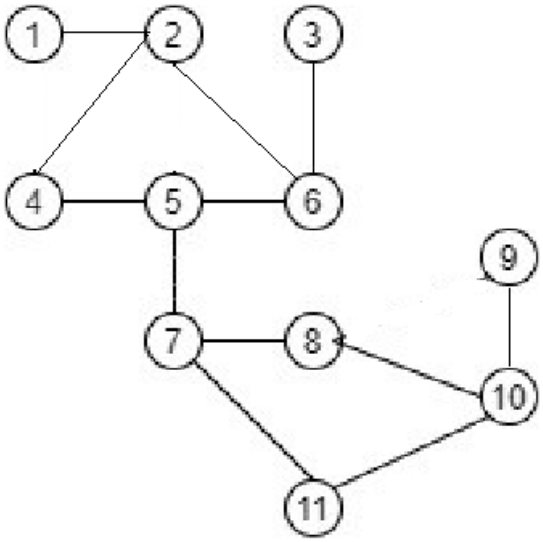
CSLR52 – Networks Laboratory

B.TECH / CSE (A)

Date : 29.11.2021 End Semester Exam Duration : 2 Hours

1) Write a program for client and server (internet domain, stream socket) which implements the following
   1. The server starts on a port (given as parameter in the command line).
   2. The client is started (server IP and port are provided in command line).
   3. Client connects to the server and waits for user messages on terminal. User messages are sent to server by the client using the socket created.
   4. The server waits for user messages from client. If server receives message "Bye" from client, it replies "Bye". For any other string, server replies the same message but after making it into capital letters.
   5. The client is closed, when it gets the message "Bye" from server.

2)



1. Create the wired topology.
2. Send UDP packets from node-1 to node-10 at t = 2 secs and TCP packets from node-2 to node-9 at t = 30 secs.
3. Assign the different queue size and bandwidth.
4. Make the link between node-6 and node-8 down at t = 8 secs and node-7 and node-11 down at t = 12 secs. Restore the link between node-6 and node-8 down at t = 16 secs and node-7 and node-11 at t = 24 secs.
5. Generate trace files for both RIP and OSPF routing protocols. Analyze and compare the both routing protocols in terms of performance metrics such as packet delivery ratio, average delivery delay, number of lost packets and throughput using gnuplots.