SSN COLLEGE OF ENGINEERING (Autonomous)

(Affiliated to Anna University, Chennai)

DEPARTMENT OF CSE

UCS 1511 NETWORK LABORATORY

**A13: Routing Protocol Simulation**

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**Learning Outcome:**

To simulate routing protocol in a network topology usin gNS2

**Write the code using socket programming in C**

1. Create 12 nodes and the links between the nodes as

a. 0 → 8 1Mb 10 ms duplex link droptail

b. 1 → 10 1Mb 10 ms duplex link droptail

c. 0 → 9 1Mb 10 ms duplex link droptail

d. 9 → 11 1Mb 10 ms duplex link droptail

e. 10 → 11 1Mb 10 ms duplex link droptail

f. 11 → 5 1Mb 10 ms duplex link droptail

2. Align all nodes properly

3. Setup a UDP connections over 0 and 5, 1 and 5 with flow id, type, packet size, rate, random fields.

4. Set different colors for different flows.

5. Use distance vector routing protocol.

6. Make links 11-5 and 7-6 down for 1 second.

7. Run the simulation for 5 seconds, and show the simulation in network animator and in trace file.

Similarly write another tcl script to simulate link state routing protocol. Also show the flooding in the simulation.