Indian Institute of Technology, Dhanbad

Computer Networks Lab Assignment

1 Network Simulator-3 (NS-3)

Deadline - 4 **Weeks**

1. Provide the configuration for the transmission of packets between two nodes connected in a network.

2. Implement MESH topology and Random topology.

3. Implement STAR topology and write a program for STAR topology using SFQ on queue at intermediate node and use different colors for packet originated from different nodes.

4. Implement RING topology and write a program for RING topology using For loop and making topology dynamic.

5. Implement stop-and-wait protocol and sliding window go-back-N protocol to provide reliable data transfer between two nodes over an unreliable network.

6. Implement the Pure ALOHA, Slotted ALOHA, CSMA, CSMA/CD protocols for packet communication between a number of nodes connected in a random topology.

7. Write two different programs for the MESH topology using UDP and TCP connection and sending data through node.