**Aim:** To simulate how static and dynamic type of routing protocol will work.

**Theory :**

To understand routing, the difference between static and dynamic routing protocol and how actually the routing protocol works.

**Routing algorithm:**

Will decide which route should be followed by the incoming packet.

Two process of router

1. Forwarding

2. Filling and updating the routing table.

**Types of routing algorithm**

**1. Non-adaptive**

a) Route is computed in advance.

b) Route won’t change, if topology changes.

c) Static routing

d) Dijkstra’s algorithm, flooding are the examples

**2. Adaptive**

a) Dynamic routing

b) Alternate path, if topology changes.

c) distance vector routing, link state routing are the examples

d) Exchange the neighborhood information when there is topology change or periodically.

**Static routing in ns2**

The simplest one is the static route with shortest route is chosen throughout the connection. We can show this static route using noisy channel or by disconnecting links. To disconnect a link between node 1 & node 4 from time 1 to 4.5 is

$ns rtmodel-at 1.0 down $n1 $n4

$ns rtmodel-at 4.5 up $n1 $n4

**Dynamic routing in ns2**

In contrast to static routing, the internet can find alternate route once it discovers that a route is disconnected. The option is used in ns2 by adding the command

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| **Conclusion:** |

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| **Post Lab:**  1. Which routing protocol gives maximum throughput, static or dynamic? And Why?  2. Which dynamic protocol gives maximum throughput, Distance vector or Link state? And why? |

Signature of Faculty Date of Completion