Date : .....

Experiment No. .....

7) Simulate the transmission of ping message over a network topology consisting of 6 nodes

```
Set ns [new Simulator]
$ns color 1 Red
$ns color 2 Green
set nt [open 7.tr w]
$ns trace-all nt
set na [open 7.nam w]
$ns namtrace-all $na
set n0 [$ns node]
set n1 [$ns node]
set n2 [$ns node]
set n3 [$ns node]
at n4 [$ns node]
set n5 [$ns node]
$ns duplex-link $n0 $n2 10Mb 1ms DropTail
$ns duplex-link $n1 $n2 10Mb 1ms DropTail
$ns duplex-link $n2 $n3 1Mb 1ms DropTail
$ns duplex-link $n3 $n4 1Mb 1ms DropTail
$ns duplex-link $n3 $n5 2Mb 1ms DropTail
$ns queue-limit $n2 $n3 3
$ns queue-limit $n3 $n3 3
set Ping1 [new Agent/Ping]
set Ping2 [new Agent/Ping]
set Ping3 [new Agent/Ping]
at Ping4 [new Agent/Ping]
$ns attach-agent $n0 $Ping1
$ns attach-agent $n1 $nt recv-Ping2
$ns attach-agent $n4 $Ping3
$ns attach-agent $n5 $Ping4.
Agent/Ping instproc recv {from rtt 3 { $self instvar node
```

Date :

Experiment No.

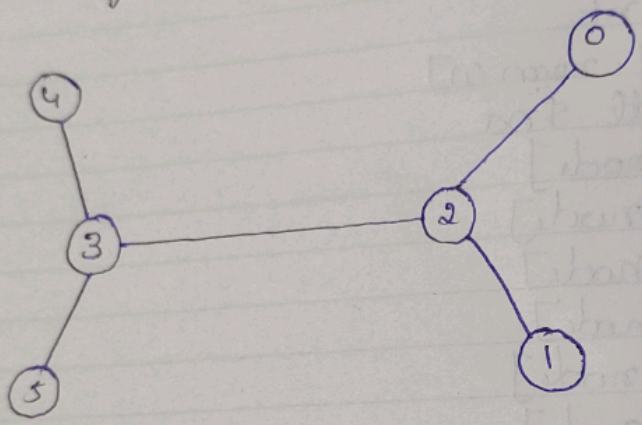
```
    puts "Node [$node_id] -> Node dest from;
RTT = $rtt ms"
}
$ns connect $Ping1 $Ping4
$ns connect $Ping2 $Ping3
$Ping1 set class_ 1
$Ping2 set class_ 2
proc Finish {} {
        global ns nt na
        $ns flush-trace
        close $nt
        close $na.
        exec nam 7.nam &
        exit 0
}
for {set t 0} {$t < 5} {set t [expr $t + 0.00]} {
        $ns at $t "$Ping1 send"
        $ns at $t "$Ping2 send"
}
$ns at 5.0 "Finish"
$ns run
```

awk file

```
Begin { Count = 0; }
{
    if [$1 == "d")
    Count ++;
}
END{
printf("\n Number of packets dropped is: %d\n", Count);
}
```

OUTPUT:

gedit 7.tcl
ns 7.tcl
gedit 7.awk
awk -f 7.awk 7.tr
Number of packets dropped is : 234



Node 1 -----> Node 4 : RTJ = 9.6 MS
Node 0 ----> Node 5 : RTJ = 8.1 MS
Node 1 ----> Node 4 : RTJ = 9.6 MO