Computer Networks Lab Exam

## Objective

Create and configure a suitable topology for both LAN and WAN using 10-15 computers, routers, and switches. Simulate the transmission of a message from one network to a computer in another network.

## Steps taken to set up the network

### Step 1:

Design anetwork topology using Cisco Packet Tracer that includes:

1. LANConfiguration: At least 10 computers connected to switches.

2. WANConfiguration: Connect the LAN network to another network using routers.

### Step 2:

Network Setup in Cisco Packet Tracer:

○ AddDevices:

1. Place and connect 10-15 computers.

2. Add necessary switches (at least 2 for the LAN setup).

3. Add at least 2 routers for WAN setup

### Step 3:

Configure IP Addresses:

1. Assign IP addresses to all computers within the LAN.

2. Configure router interfaces with appropriate IP addresses.

3. Set up routing protocols or static routes as needed for WAN communication

### Step 4:

Configuration Steps:

○ LANConfiguration:

1. Connect computers to the switches.

2. Configure IP addresses on each computer.

3. Connect switches with each other as needed.

○ WANConfiguration:

1. Connect routers to each other.

2. Configure router interfaces with IP addresses.

3. Set up routing (static or dynamic) to ensure connectivity between the LANs.

### Step 5:

Simulation:

○ Send a Message:

1. Use the simulation mode in Cisco Packet Tracer.

2. Configure and send a message from a computer in one network to a computer in another network.

3. Capture and verify the message transmission

