



**DIPLOMA IN COMMUNICATION AND COMPUTER  
NETWORKING**

**CENTRALIZED QUESTION BANK**

**1055234520 - NETWORK LAB**

**DIRECTORATE OF TECHNICAL  
EDUCATION GOVERNMENT OF  
TAMILNADU**

## DIPLOMA END SEMESTER / YEAR EXAMINATION – 2025

**Course:** Communication and Computer Networking

**Subject :** Network Lab

**QP Code :**1055234520

**Time :** 3 Hours

**Date :**

**Session:**

**Max Marks:**100

### Answer the following Questions

1. a) Do the following cabling works in a network
  - i) Cable Crimping
  - ii) Test the Crimped cable using a Cable tester.
- b) Configuration of Internet connection and use IPCONFIG, PING/ Tracert, and Net stat utilities to debug the Network issues.
2. a) Implement the cross-wired cable and straight-through cable using the Clamping tool.
- b) Learn to use commands like tcp dump, net stat, ns look up, and trace route in Windows. Capture ping and trace route PDUs using a network protocol analyzer and Examine
3. a) Installation and configuration of Network Devices: Modem, HUB, Switch, and Routers.
- b) Learn to use commands like ping, ns lookup, trace route, host, net stat, ARP, Dig, Route, Eth tool, Hostname, and if con fig in Linux.
4. a) Establish Peer to Peer network connection between two systems using Switch and Router in a LAN.
- b) Create a subnet with 5 systems and configure Host IP, Subnet Mask, Default Gateway, and DNS for the systems in that subnet. (TCP/IP Configuration).
5. a) Creation of a simple network with two PCs using a hub.
  - i) Identify the proper cable to connect the PCs to the hub
  - ii) Configure workstation IP address information.
  - iii) Test connectivity using the Ping command
- b) Configure a DHCP server and firewall.
6. a) Creation of various network topologies using network devices, cables, and computers.
- b) Transfer of files between systems in LAN.
7. a) Do the following cabling works in a network:
  - i) Cable Crimping
  - ii) Test the Crimped cable using a Cable tester.

- b) Learn to use commands like tcp dump, net stat, ns look up, and trace route in Windows. Capture ping and trace route PDUs using a network protocol analyzer and examine.
- 8 a) Do the following cabling works in a network:  
i) Cable Crimping  
ii) Test the Crimped cable using a Cable tester.
- b) Learn to use commands like ping, ns lookup, trace route, host, net stat, ARP, Dig, Route, Eth tool, Hostname, and if config in Linux.
- 9 a) Do the following cabling works in a network:  
i) Cable Crimping  
ii) Test the Crimped cable using a Cable tester.
- b) Create a subnet with 5 systems and configure Host IP, Subnet Mask, Default Gateway, and DNS for the systems in that subnet. (TCP/IP Configuration).
- 10 a) Do the following cabling works in a network:  
i) Cable Crimping  
ii) Test the Crimped cable using a Cable tester.
- b) Configure a DHCP server and firewall.
- 11 a) Do the following cabling works in a network:  
i) Cable Crimping  
ii) Test the Crimped cable using a Cable tester.
- b) Transfer of files between systems in LAN.
- 12 a) Implement the cross-wired cable and straight-through cable using the Clamping tool.
- b) Configuration of Internet connection and use IPCONFIG, PING/Tracert, and Net stat utilities to debug network issues.
- 13 a) Implement the cross-wired cable and straight-through cable using the Clamping tool.
- b) Installation and configuration of Network Devices: Modem, HUB, Switch, and Routers.
- 14 a) Implement the cross-wired cable and straight-through cable using the Clamping tool.
- b) Establish Peer-to-Peer network connection between two systems using Switch and Router in a LAN.
- 15 a) Implement the cross-wired cable and straight-through cable using the Clamping tool.
- b) Creation of a simple network with two PCs using a hub.
- 16 a) Implement the cross-wired cable and straight-through cable using the Clamping tool.
- b) Creation of various network topologies using network devices, cables, and computers.

- 17 a) Installation and configuration of Network Devices: Modem, HUB, Switch, and Routers.
- b) Configuration of Internet connection and use IPCONFIG, PING/Tracert, and Net stat utilities to debug network issues.
- 18 a) Installation and configuration of Network Devices: Modem, HUB, Switch, and Routers.
- b) Learn to use commands like tcp dump, net stat, ns look up, and trace route in Windows. Capture ping and trace route PDUs using a network protocol analyzer and examine.
- 19 a) Installation and configuration of Network Devices: Modem, HUB, Switch, and Routers.
- b) Create a subnet with 5 systems and configure Host IP, Subnet Mask, Default Gateway, and DNS for the systems in that subnet. (TCP/IP Configuration).
- 20 a) Installation and configuration of Network Devices: Modem, HUB, Switch, and Routers.
- b) Configure a DHCP server and firewall.
- 21 a) Installation and configuration of Network Devices: Modem, HUB, Switch, and Routers.
- b) Transfer of files between systems in LAN.
- 22 a) Establish Peer-to-Peer network connection between two systems using Switch and Router in a LAN.
- b) Configuration of Internet connection and use IPCONFIG, PING/Tracert, and Net stat utilities to debug network issues.
- 23 a) Establish Peer-to-Peer network connection between two systems using Switch and Router in a LAN.
- b) Learn to use commands like tcp dump, net stat, ns look up, and trace route in Windows. Capture ping and trace route PDUs using a network protocol analyzer and examine.
- 24 a) Establish Peer-to-Peer network connection between two systems using Switch and Router in a LAN.
- b) Learn to use commands like ping, ns lookup, trace route, host, net stat, ARP, Dig, Route, Eth tool, Hostname, and if config in Linux.
- 25 a) Establish Peer-to-Peer network connection between two systems using Switch and Router in a LAN.
- b) Configure a DHCP server and firewall.

- 26 a) Establish Peer-to-Peer network connection between two systems using Switch and Router in a LAN.
- b) Transfer of files between systems in LAN.
- 27 a) Creation of a simple network with two PCs using a hub.
- b) Configuration of Internet connection and use IPCONFIG, PING/Tracert, and Net stat utilities to debug network issues.
- 28 a) Creation of a simple network with two PCs using a hub.
- b) Learn to use commands like tcp dump, net stat, ns look up, and trace route in Windows. Capture ping and trace route PDUs using a network protocol analyzer and examine.
- 29 a) Creation of a simple network with two PCs using a hub.
- b) Installation and configuration of Network Devices: Modem, HUB, Switch, and Routers.
- 30 a) Creation of a simple network with two PCs using a hub.
- b) Establish Peer-to-Peer network connection between two systems using Switch and Router in a LAN.
- 31 a) Creation of a simple network with two PCs using a hub.
- b) Transfer of files between systems in LAN.
- 32 a) Creation of various network topologies using network devices, cables, and computers.
- b) Configuration of Internet connection and use IPCONFIG, PING/Tracert, and Net stat utilities to debug network issues.
- 33 a) Creation of various network topologies using network devices, cables, and computers.
- b) Learn to use commands like tcp dump, net stat, ns look up, and trace route in Windows. Capture ping and trace route PDUs using a network protocol analyzer and examine.
- 34 a) Creation of various network topologies using network devices, cables, and computers.
- b) Installation and configuration of Network Devices: Modem, HUB, Switch, and Routers.
- 35 a) Creation of various network topologies using network devices, cables, and computers.
- b) Establish Peer-to-Peer network connection between two systems using Switch and Router in a LAN.

- 36 a) Creation of various network topologies using network devices, cables, and computers.  
b) Configure a DHCP server and firewall.

**Allocation of Marks**

<b>Sl. No</b>	<b>Description</b>	<b>Marks</b>
1	Aim(05) Program from Part A(30)	35
2	Aim(05) Program from Part B(30)	35
3	Executing anyone program (Part A or Part B)	15
4	Output	10
5	Viva Voce	05
	<b>Total</b>	<b>100</b>