Practice 1 – Basic Router Configuration
Scenario:
- Configure a simple network with one router, two switches, and two PCs.

Tasks:
1. Assign IP addresses to PCs and router interfaces.
2. Configure the router hostname and enable password.
3. Set console and VTY passwords.
4. Enable connectivity between PCs through the router (ping test).

Evaluation:
- Correct IP addressing and subnet mask.
- Device naming and security configuration.
- Successful end-to-end ping.

Practice 2 – VLAN and Inter-VLAN Routing
Scenario:
- A small office has two departments (HR and IT) connected to a Layer 2 switch and a router for inter-VLAN routing.

Tasks:
1. Create VLAN 10 (HR) and VLAN 20 (IT).
2. Assign ports to each VLAN.
3. Configure subinterfaces on the router using 802.1Q encapsulation.
4. Enable communication between departments.

Evaluation:
- VLAN creation and correct port assignment.
- Proper subinterface configuration.
- Successful ping between HR and IT PCs.

Practice 3 – Static Routing
Scenario:
- Three routers are connected in series (R1–R2–R3). Each router has one connected network.

Tasks:
1. Configure IP addressing on all interfaces.
2. Set static routes so all networks can communicate.
3. Verify routing with ping and show ip route.

Evaluation:
- Correct static route entries.
- End-to-end connectivity.
- Proper use of verification commands.