

# COMPUTER NETWORKS

- ◆ What is a computer network?
- ◆ What is the difference between a LAN and a WAN?
- ◆ What are the layers of the OSI model?
- ◆ What is TCP/IP and how does it relate to the OSI model?
- ◆ What is the purpose of the Network layer in the OSI model?
- ◆ Explain the concept of subnetting.
- ◆ What is ARP and how does it work?
- ◆ What is a MAC address?
- ◆ What is the difference between a hub, a switch, and a router?
- ◆ What is the purpose of DNS in a network?
- ◆ What is DHCP and how does it work?
- ◆ What is the difference between a static IP address and a dynamic IP address?
- ◆ Explain the concept of port forwarding.
- ◆ What is NAT and how does it work?
- ◆ What is a firewall and what is its purpose?
- ◆ What is the difference between symmetric and asymmetric encryption?
- ◆ What is a VPN and how does it work?
- ◆ What is a VLAN and why is it used?
- ◆ What is the difference between half-duplex and full-duplex communication?
- ◆ What is a subnet mask?
- ◆ What is a default gateway?
- ◆ What is the purpose of ICMP in networking?
- ◆ What is a packet and what information does it contain?
- ◆ What is the purpose of a MAC table in a switch?

- ◆ What is a broadcast domain?
- ◆ Explain the concept of Quality of Service (QoS).
- ◆ What is a proxy server and what is its purpose?
- ◆ What is a DNS cache and why is it used?
- ◆ What is the difference between TCP and UDP?
- ◆ What is the purpose of a loopback address?
- ◆ Explain the concept of VLAN trunking
- ◆ What is the difference between a physical address and a logical address?
- ◆ What is a network protocol and give examples.
- ◆ What is a collision domain?
- ◆ What is a network topography and what are the different types?
- ◆ What is a DMZ and why is it used in network security?
- ◆ What is the purpose of a MAC filter in a wireless network?
- ◆ What is a MAN and how does it differ from a LAN and WAN?
- ◆ What is the purpose of a gateway in a network?
- ◆ Explain the concept of multiplexing in networking.
- ◆ What is a proxy ARP and when is it used?
- ◆ What is a routing table and how does it work?
- ◆ What is the purpose of a subnet in a network?
- ◆ What is the difference between a hub and a switch?
- ◆ What is the purpose of a DNS server?
- ◆ Explain the concept of network congestion.
- ◆ What is a broadcast address?
- ◆ What is the difference between a static route and a dynamic route?
- ◆ What is the purpose of a network interface card (NIC)?
- ◆ What is the difference between a private IP address and a public IP address?

