Networking Important Questions

Basic Networking Concepts

- What is a computer network? Define and explain types like LAN, WAN, MAN, PAN.
- Explain the OSI and TCP/IP models with layers and functions.
- What is IP addressing? Differences between IPv4 and IPv6.
- What is subnetting? Why is it used? Explain with example.
- Define MAC address and its significance.
- Explain different network topologies (bus, star, ring, mesh).
- What is latency? What factors affect it?

Interview and Frequently Asked Questions

- What are different network devices? (Router, switch, gateway, etc.)
- Explain DNS and how domain name resolution works.
- What is DHCP and how does it function?
- Differentiate between TCP and UDP.
- What are the types of transmission media? Explain guided and unguided media.
- What is NAT (Network Address Translation)?
- Explain ARP (Address Resolution Protocol).

- What are VLANs and their purpose?
- What is firewall and how does it help secure a network?

University Exam Questions

- Describe the detailed architecture of TCP/IP and OSI models with diagrams.
- Explain the process of subnetting a given IP address range.
- Write the differences between TCP and UDP protocols.
- What are the different routing algorithms? Explain distance vector and link state routing.
- Draw and explain the Ethernet frame structure.
- Explain the concepts of data encapsulation and de-encapsulation.
- Describe the role and function of common protocols like HTTP, FTP, SMTP, and SNMP.
- Explain wireless networking standards and technologies.
- Describe network security techniques such as encryption, VPN, and IDS/IPS.

Long and Scenario-Based Questions

- Discuss the advantages and disadvantages of various transmission media.

- Explain how the DNS system works including hierarchy and resolution process.
- Explain different types of network attacks and preventive measures.
- Describe how TCP establishes a connection (three-way handshake).
- Write and explain IP packet forwarding process through routers.
- Describe the concepts of network address translation and proxy servers.
- Explain important network troubleshooting tools and commands (ping, traceroute, nslookup).

Advanced Networking Questions

- What is Software Defined Networking (SDN)?
- Describe Quality of Service (QoS) and its importance.
- Explain various wireless security protocols (WEP, WPA, WPA2).
- What is MPLS and how does it work?
- Explain VPN types and how VPNs secure networks.
- Discuss IPv6 benefits and transition mechanisms.