Q1. What do you mean by network topology?

Q2. What are the advantages of Distributed Processing?

Q3. What is the criteria to check the network reliability?

Q4. What are the different factors that affect the performance of a network?

Q5. What makes a network effective and efficient?

Q6. What is a subnet mask and how does it work?

Q7. What is the difference between TCP and UDP protocols? When would you use one over the other?

Q8. Can you explain the OSI model and its layers?

Q9. What is the purpose of a firewall and how does it work?

Q10. How does NAT (Network Address Translation) work?

Q11. What is a VLAN (Virtual Local Area Network)? Can you explain how it works?

Q1 What is the purpose of a computer network, and how does it facilitate communication between devices?

Q2 Can you explain the key differences between a local area network (LAN) and a wide area network (WAN)?

Q3 How does a router function in a computer network, and what role does it play in directing data packets?

Q4 What is the OSI model, and what are the specific functions performed by each of its seven layers?

Q5 Could you outline the disparities between a hub and a switch in terms of their operation and effectiveness?

Q6 Elaborate on the concept of a MAC address and its significance in network communication.

Q7 What is the purpose of an IP address, and how does it assist in identifying devices on a network?

Q8 Can you highlight the primary distinctions between IPv4 and IPv6 in terms of addressing and functionality?

Q9 How does subnetting work, and what advantages does it offer in terms of network management?

Q10 Explain the role and functioning of the Domain Name System (DNS) in translating domain names to IP addresses.

Q11 What is DHCP (Dynamic Host Configuration Protocol), and how does it simplify the assignment of IP addresses in a network?

Q12 Discuss the TCP/IP protocol suite, its key protocols, and their respective functions in network communication.

Q13 What is the purpose of a firewall in a computer network, and how does it enhance network security?

Q14 Explain Network Address Translation (NAT) and its role in enabling multiple devices to share a single public IP address.

Q15 What is a proxy server, and how does it act as an intermediary between clients and other servers on a network?

Q16 How does a gateway facilitate communication between different networks, and what functions does it perform?

Q17 Can you elaborate on the concept of a virtual local area network (VLAN) and how it segments a network?

Q18 What are the distinctions between physical addresses (MAC addresses) and logical addresses (IP addresses)?

Q19 Explain the concept of a network protocol, and provide examples of widely used protocols in computer networks.

Q20 Compare and contrast the features and characteristics of the Transmission Control Protocol (TCP) and User Datagram Protocol (UDP).

Q21 What is a socket, and how does it enable communication between processes on different devices in a network?

Q22 What is the purpose of the Address Resolution Protocol (ARP), and how does it map IP addresses to MAC addresses?

Q23 Define and describe a network packet, including its structure and the information it carries.

Q24 Explain the principles and functioning of packet switching, and how it differs from circuit switching.

Q25 What is a Virtual Private Network (VPN), and how does it provide secure remote access to a private network over the internet?

Q26 Describe the concept of bandwidth in computer networks, including its measurement and impact on network performance.

Q27 What is latency in the context of computer networks, and how does it affect network responsiveness?

Q28 Can you provide an overview of a routing table and its role in determining the optimal path for data packets in a network?

Q29 How does a wireless network operate, and what are some of the key considerations for ensuring its security?

Q30 Discuss the differences between symmetric and asymmetric encryption algorithms, and provide examples of each.

Q31 What is SSL/TLS, and how do these protocols ensure secure communication over the internet?

Q32 Explain what a denial-of-service (DoS) attack is, including its objectives, methods, and potential impact on a network.

Q33 Elaborate on the concept of a distributed denial-of-service (DDoS) attack, including how it is orchestrated and its potential counter

Q34 Can you explain the role of computer networks and how they facilitate communication between devices in an organization?

Q35 Describe the differences between a local area network (LAN) and a wide area network (WAN). How do these networks support different business requirements?

Q36 In a computer network, what is the function of a router and how does it determine the path for data packets?

Q37 The OSI model is widely used to understand network communication. Could you explain the purpose of each of its seven layers and how they interact with each other?

Q38 During network infrastructure planning, how do you decide whether to use a hub or a switch? What are the advantages and disadvantages of each?

Q39 MAC addresses play a crucial role in network communication. Can you explain what a MAC address is and how it is used in data transmission?

Q40 IP addresses are fundamental in identifying devices on a network. Can you discuss the purpose of an IP address and the difference between IPv4 and IPv6?