## Module 6. Network security, Maintenance and Troubleshooting procedures

### **Topic: A SOHO Networks**

####  Beginner Question

1. What is SOHO network?

Ans: A SOHO is Small Office Home Office network. it refers to a type of local area or LAN network connection designed for small businesses.

1. What does SOHO mean networking?

Ans: A soho mining small office or home office network.

####  Intermediate Question

1. How does a SOHO network work?

Ans: SOHO networks can be a small wired Ethernet LAN or a combination of wired and wireless computers.

1. Issues with Soho Networking?

Ans: in soho network it is small network in this network there are limited area or limited device its call small office or home office issues.

####  Advance Question

1. How Small is the “S” in SOHO?

Ans: in soho network s is smaller then 10 people.

1. SOHO Routers vs. Home Routers?

Ans: SOHO routers require almost the same functions as home broadband routers like

### **Topic: NAT & PAT**

####  Beginner Question

1. What is NAT?

Ans: NAT stands for network address translation. It's a way to map multiple private addresses inside a local network to a public IP address before transferring the information onto the internet.

1. What is PAT?

Ans: Port Address Translation (PAT) is an extension of Network Address Translation that permits multiple devices on a LAN to be mapped to a single public IP address to conserve IP addresses.

1. Different between NAT & PAT?

Ans: NAT stands for Network Address Translation. PAT stands for Port Address Translation. In NAT, Private IP addresses are translated into the public IP address. In PAT, Private IP addresses are translated into the public IP address via Port numbers.

####  Intermediate Question

1. However, Will Nat work?

Ans: NAT works by having a firewall act as an intermediary for traffic entering and leaving the protected network.

1. Explain NAT?

Ans: NAT stands for network address translation. It's a way to map multiple private addresses inside a local network to a public IP address before transferring the information onto the internet.

NAT has major two type one is static or second is dynamic.

####  Advance Question

1. What is different between Static & Dynamic NAT?

Ans: The main difference between dynamic NAT and static NAT is that static NAT allows a remote host to initiate a connection to a translated host if an access list exists that allows it, while dynamic NAT does not.

1. NAT stand for?

Ans: network address translation.

1. PAT stand for?

Ans: port address transalation

## Topic: Authentication and Access Control

###  Beginner Question

1. What Is ACL?

Ans: An access control list on a router consists of a table that stipulates which kinds of traffic are allowed to access the system.

ACL is act like a filter of network filter.

1. What Are Different Types of ACL?

Ans: Rule-based access control.

Standard access control list.

Extended access list.

###  Intermediate Question

1. Explain Standard Access List?

Ans: Definition of Standard Access List. A standard access list is a type of ACL used to filter traffic based on the source IP address only. It is called "standard" because it uses only the first 8 bits of the IP address to determine whether traffic should be permitted or denied.

1. Explain Extended Access List?

Ans: An extended access control list can determine what traffic is allowed or denied access, acting as a gatekeeper for your network. It can give the system administrator setting up the network a higher degree of flexibility and control.

###  Advance Question

1. What Is Wildcard Mask?

Ans: A wildcard mask is a mask of bits that indicates which parts of an IP address are available for examination. In the Cisco

1. In Which Directions We Can Apply an Access List?

Ans: An access control list is we can apply in inbound or outbound directions.

### **Topic: WAN Technologies**

####  Beginner Question

1. Fiber-optic communication?

Ans: In Fiber-optic communication, transmission reliability is an advantage such that link failure is less likely to occur relative to copper-based wired transmission. The high data transmission rate and low costs make the technology a possible alternative to handle network requirements in NANs and WANS.

1. What is Leased Line?

Ans: A leased line is an allocated circuit between two points of communication.

1. Explain Circuit switching?

Ans: Circuit switching is a type of network configuration in which a physical path is obtained and dedicated to a single connection between two endpoints in the network for the duration of a dedicated connection.

####  Intermediate Question

1. Explain Packet Switching?

Ans: Packet switching is a means of organizing and sharing data into bits called packets which are then transmitted across a digital network.

1. What is difference between leased line and broadband?

Ans: A leased line is a dedicated connection, and therefore there is no contention. Your business is connected directly to the local exchange and therefore you don't share access with local residents or businesses. Conversely, broadband is not a dedicated connection and therefore you share your connection with others.

1. How much is a 100mb Leased Line?

Ans- 580000 around.

####  Advance Question

1. Difference between a POTS line and a leased line?

Ans- POTS line is voice-grade, dial up, while leased line is better quality, always on. POTS line is voice - grade , dial up , while leased line is better quality , always on

1. What is the process of packet switching?

Ans- Packet switching is the transfer of small pieces of data across various networks.

1. Difference between circuit switching and packet switching?

Ans- In circuit switching, users are charged based on time and the basis of distance. In packet switching, users are charged based on time and number of bytes carried & not based on distance.

1. Practice on printer sharing ?

Ans- done

1. Use of IIS [ Via "add and remove" feature from control panel. "appwiz.cpl" command]

Ans- done

## Topic: Communication technologies Cloud and Virtualization

###  Beginner Question

1. What is virtualization?

Ans- Virtualization is technology that you can use to create virtual representations of servers, storage, networks, and other physical machines.

1. What are two types of virtualization in cloud?

Ans- internal and external virtulization.

###  Intermediate Question

1. What are the two types of virtualization?

Ans- operating system virtualization and full virualization.

1. What is VMware virtualization technology?

Ans - Virtualization is software it is to simulate hardware functionality and create a virtual computer system.

###  Advance Question

1. What is the difference between cloud and virtualization?

Ans - virtualization creates simulated versions of a machine's software or hardware components, while cloud computing is a model that enables users to access a shared pool of resources conveniently.

1. What are the benefits of implementing virtualization in cloud computing?

Ans- virtualization in cloud computing is If you store data on virtual servers or clouds, you won't have to buy physical hardware or systems. You can therefore reduce your waste, electricity, and maintenance costs.

### **Topic: Monitoring Tools**

####  Beginner Question

1. Why are network monitoring tools used?

Ans- Network monitoring tools are often used to troubleshoot problems.

1. Explain firewalls ?

Ans- Network monitoring tools are often used to troubleshoot problems.

####  Intermediate Question

1. Explain core switches ?

Ans - A core switch establishes connections between different segments and subnets within a network, enabling seamless communication and data transfer.

1. Explain client systems?

Ans- Client Systems means the Client's information technology infrastructure, including computers, software, hardware, databases

####  Advance Question

1. What is network management?

Ans- Network management is the sum total of applications, tools and processes used to provision, operate, maintain, administer and secure network infrastructure.

1. Explain Event Viewer?

Ans- Event Viewer is a tool in the Microsoft Windows operating system that provides a comprehensive log of system events to offer administrators the information required for system upkeep, security, and accountability.

1. Practice "parental control" or "family safety" option in control panel

Ans - done

### **Topic: Network Security, Network vulnerabilities**

####  Beginner Question

1. What are network vulnerabilities?

Ans - A network vulnerability is a weakness or flaw in software, hardware, or organizational processes, which when compromised by a threat, can result in a security breach.

1. What are the types of network security attacks?

Ans - Malware Attack.

Phishing Attack.

Password Attack.

Man-in-the-Middle Attack.

SQL Injection Attack.

####  Intermediate Question

1. What is virus in network security?

Ans - A computer virus is a program that spreads by first infecting files or the system areas of a computer or network router's hard drive and then making copies of itself.

1. What is the difference between virus and antivirus?

Ans - A virus is a computer program that can replicate itself and infect your computer. Antivirus software is used to prevent, detect, and remove malware like computer viruses, worms, spyware, Trojan horses, adware, and spyware.

####  Advance Question

1. Who is vulnerable in network security?

Ans -

1. How do you assess vulnerability?

Ans -

1. What are the principles of network security?

Ans - confidentiality

integrity

availability

1. What is a firewall to use for?

Ans - A Firewall is a network security device that monitors and filters incoming and outgoing network traffic based on an organization's previously established security policies.

1. configure advanced firewall setting?

Ans - done

1. configure "date and time" opti?

Ans - done