**Module 6. Network security, Maintenance**

**and Troubleshooting procedures**

**Topic: A SOHO Networks**

**∙ Beginner Question**

1. What is SOHO network?

Ans. SOHO network is Small Office and Home Office Networks.

2. What does SOHO mean networking?

Ans. SOHO stands for Small Office and Home Office Networks.

**∙ Intermediate Question**

1. How does a SOHO network work?

Ans. It allows computers in a home office or remote office to connect to a corporate network, or access centralized, shared resources

2. Issues with Soho Networking?

Ans. Issues With Soho Networking…

Unlike larger businesses, small businesses generally cannot afford to hire a professional staff to manage their networks.

**∙ Advance Question**

1. How Small is the “S” in SOHO?

Ans.

2. SOHO Routers vs. Home Routers?

Ans.

**Topic: NAT & PAT**

**∙ Beginner Question**

1. What is NAT?

Ans. NAT stands for Network Address Translation.

2. What is PAT?

Ans. Port Address Translation

3. Different between NAT & PAT?

Ans. 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. A NAT works by selecting gateways that sit between two local networks: the internal network, and the outside network.

2. Explain NAT?

It's a way to map multiple local private addresses to a public one before transferring the information. Organizations that want multiple devices to employ a single IP address use NAT, as do most home routers.

**∙ 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.

2. NAT stand for?

Ans.  NAT stands for Network Address Translation.

3. PAT stand for?

Ans. PAT stand for Port Address Translation.

**Topic: Authentication and Access Control**

**∙ Beginner Question**

1. What Is Acl?

Ans. Access Control List.

2. What Are Different Types of Acl?

Ans. [1] Standard ACL [2] Extended ACL.

**∙ Intermediate Question**

1. Explain Standard Access List?

Ans. These are the Access-list which are made using the source IP address only

2. Explain Extended Access List?

Ans. An extended access control list (ACL) can determine what traffic is allowed or denied access, acting as a gatekeeper for your network.

**∙ Advance Question**

1. What Is Wildcard Mask?

Ans.

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

Ans.

**Topic: WAN Technologies**

**∙ Beginner Question**

1. Fiber-optic communication

Ans. Fiber-optic communication is a method of transmitting information from one place to another by sending pulses of infrared light through an optical fiber

2. What is Leased Line

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

3. 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 the method by which the internet works, it features delivery of packets of data between devices over a shared network.

2. What is difference between leased line and broadband?

Ans. A leased line contract guarantees businesses uninterruptible download and upload speeds, unlike broadband that competes for internet speed and bandwidth with other users.

3. How much is a 100mb Leased Line?

Ans.

**∙ 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 and always on.

2. What is the process of packet switching?

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

3. Difference between circuit switching and packet switching?

Ans. packet switching is connectionless, whereas circuit switching is connection-oriented.

4. Practice on printer sharing?

Ans. Done In Lab.

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

Ans. Done In Lab.

**Topic: Communication technologies Cloud and Virtualization**

**∙ Beginner Question**

1. What is virtualization?

Ans.

2. What are two types of virtualization in cloud?

Ans.

**∙ Intermediate Question**

1. What are the two types of virtualization?

Ans.

2. What is VMware virtualization technology?

Ans.

**∙ Advance Question**

1. What is the difference between cloud and virtualization?

Ans.

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

Ans.

**Topic: Monitoring Tools**

**∙ Beginner Question**

1. Why are network monitoring tools used?

Ans. Network monitoring provides the information that network administrators need to determine, in real time, whether a network is running optimally.

2. Explain firewalls

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.

**∙ Intermediate Question**

1. Explain core switches

Ans. A core switch is the network switch installed at the backbone of the layered or hierarchy network.

2. Explain client systems

Ans. A system or a program that requests the activity of one or more other systems or programs, called servers, to accomplish specific tasks.

**∙ 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.

2. Explain Event Viewer

Ans. The Event Viewer is a tool in Windows that displays detailed information about significant events on your computer.

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

Ans. Done In Lab.

**Topic: Network Security, Network vulnerabilities**

**∙ Beginner Question**

1. What are network vulnerabilities?

Ans. Network security vulnerabilities are weaknesses or flaws within the system's software, hardware, or organizational processes.

2. What are the types of network security attacks?

Ans. Types of network security attacks.

[1] DOS [2] DDOS [3] IP SPOOFING [4] SOCIAL ENGI. [5] BRUTE FORCE

[6] SNNIFING [7] SESSION HIJACKING [8] MITM.

**∙ Intermediate Question**

1. What is virus in network security?

Ans. A computer program that can copy itself and infect a computer without permission or knowledge of the user.

2. What is the difference between virus and antivirus?

Ans. Anti-virus software is a computer program used to prevent, detect, and remove the virus. Whereas, Virus is a kind of malware that infects files and then spreads through a device whenever the file or program is run.

**∙ Advance Question**

1. Who is vulnerable in network security?

Ans. Network security vulnerabilities are weaknesses or flaws within the system's software, hardware, or organizational processes.

2. How do you assess vulnerability

Ans. A vulnerability assessment is a systematic review of security weaknesses in an information system.

3. What are the principles of network security?

Ans. These cyber security principles are grouped into four key activities: govern, protect, detect and respond.

4. What is a firewall to use for?

Ans. A firewall's main purpose is to allow non-threatening traffic in and to keep dangerous traffic out.

5. configure advanced firewall setting?

Ans. Done In Lab.

6. configure "date and time" opti

Ans. Done In Lab.