

module-2

Assignment: Network Security, Maintenance, and Troubleshooting Procedures

Section 1: Multiple Choice

1. What is the primary purpose of a firewall in a network security infrastructure?

- a) Encrypting network traffic
- b) Filtering and controlling network traffic
- c) Assigning IP addresses to devices
- d) Authenticating users for network access

2. What type of attack involves flooding a network with excessive traffic to disrupt normal operation?

- a) Denial of Service (DoS)
- b) Phishing
- c) Spoofing
- d) Man-in-the-Middle (MitM)

3. Which encryption protocol is commonly used to secure wireless network communications?

- a) WEP (Wired Equivalent Privacy)
- b) WPA (Wi-Fi Protected Access)
- c) SSL/TLS (Secure Sockets Layer/Transport Layer Security)
- d) AES (Advanced Encryption Standard)

4. What is the purpose of a VPN (Virtual Private Network) in a network security context?

8. Describe the steps involved in setting up a wireless network for a small office or home office (SOHO) environment.

Ans: Plan, configure, secure, test, document

Section 4: Practical Application

9. Demonstrate how to configure a router for Internet access using DHCP (Dynamic Host Configuration Protocol).

Ans: access route settings, enable dhcp

Section 5: Essay

10. Discuss the importance of network documentation in the context of building and managing networks.

Ans: Critical for network integrity, troubleshooting, compliance, upgrades, and future planning.

- a) Encrypting network traffic to prevent eavesdropping
- b) Filtering and blocking malicious websites
- c) Restricting access to network resources based on user identity
- d) Detecting and mitigating network intrusions and attacks

Section 2: True or False

5. Patch management is the process of regularly updating software and firmware to address security vulnerabilities and improve system performance.

ANS: true

6. : A network administrator should perform regular backups of critical data to prevent data loss in the event of hardware failures, disasters, or security breaches.

ANS: true

Traceroute is a network diagnostic tool used to identify the route and measure

the latency of data packets between a source and destination device.

ANS: true

Section 3: Short Answer

8. Describe the steps involved in conducting a network vulnerability Assessment.

Conducting a network vulnerability assessment typically involves:

Identifying assets and resources to be protected.

Assessing vulnerabilities and potential threats.

9. Demonstrate how to troubleshoot network connectivity issues using the ping command.

Open a command prompt (Windows) or terminal (Linux/Mac).

Type ping <IP address> or ping <hostname> and press Enter.

Check if the destination device responds with replies or if there's packet loss.

10. Discuss the importance of regular network maintenance and the key tasks involved in maintaining network infrastructure.

Ans: Security: Updating firewalls, patches, and configurations.

Performance: Monitoring and optimizing network performance.

Reliability: Testing and replacing hardware to prevent failures.