**Assignment module 6:**

**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

**ANS : b) Filtering and controlling network traffic**

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)

**ANS : a) Denial of Service (DoS)**

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)

**ANS : b) WPA (Wi-Fi Protected Access)**

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

**ANS : VPN (Virtual Private Network) is a tunnelling protocol which creates an direct imaginary tunnel from source to destination node such a way that no one in middle can trace the communication. It’s main purpose to make our data / communication invisible/non-traceable in its real route (by doing encapsulation and encryption) , such a way that it remains confidential and no privacy is hindered.**

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**Section 2: True or false**

True or False: Patch management is the process of regularly updating software and firmware to address security vulnerabilities and improve system performance.

**ANS : TRUE**

True or False: 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**

True or False: 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**

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**Section 3: Short Answer**

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

**[TOPIC IS REMAINING]**

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**Section 4: Practical Application**

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

**[TOPIC IS REMAINING]**

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**Section 5: Essay**

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

**[TOPIC IS REMAINING]**

1 1. Which of the following best describes the purpose of a VPN (Virtual Private Network)?

a) Encrypting network traffic to prevent eavesdropping

b) Connecting multiple LANs (Local Area Networks) over a wide area network (WAN)

c) Authenticating users and controlling access to network resources

d) Reducing latency and improving network performance

**ANS : a) Encrypting network traffic to prevent eavesdropping**