

Q.1 **Write the following.**

- A Explain the fundamental principles of Cyber Security (CIA Triad) with examples. 5
- B What is Network Security? Explain any four network security tools or techniques. 5

OR

- A What is Authentication? Explain different authentication methods. 5
- B What is VPN? Explain how a VPN ensures secure communication. 5

Q.2 **Write the following.**

- A Differentiate between authentication and authorization with suitable examples. 5
- B Explain any five common cyber threats with examples. 5

OR

- A What is a firewall? Explain its types and functions. 5
- B Explain Intrusion Detection Systems (IDS) and its types. 5

Q.3 **Write the following.**

- A Describe Wi-Fi security protocols such as WEP, WPA, WPA2 5
- B Explain common wireless network vulnerabilities and their countermeasures. 5

OR

- A Explain the IT Act 2000 and its significance in cybersecurity. 5
- B Discuss the role and responsibilities of an ethical hacker. 5

Q.4 **Write the following.**

- A Describe the encryption–decryption process with a neat diagram. 5
- B Explain the different types of penetration testing (black-box, white-box, grey-box) 5

OR

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- A Discuss how organizations can protect user privacy while collecting data. 5
- B A student finds that their social media account has been hacked. Explain the steps they should take to secure the account and prevent future cyber attacks 5

Q.5 **MCQ** 10

**1.Unauthorized access to someone's system is called:**

- a) Hacking b) Phishing c) Spoofing d) Spamming

**2.VPN helps in:**

- a) Slowing internet b) Secure remote connection  
c) Formatting data d) None

**3.Phishing attacks are mainly used to:**

- a) Destroy hardware b) Steal login credentials  
c) Speed up system d) Increase bandwidth

**4.A program that replicates itself and spreads is called:**

- a) Worm b) Trojan c) Rootkit d) Adware

**5.Which of the following is a biometric authentication method?**

- a) Password b) Fingerprint c) PIN d) OTP

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