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BRAINWARE UNIVERSITY

Term End Examination 2024-2025

Programme – B.Sc.(ANCS)-Hons-2024

Course Name – Cyber Security Essentials

Course Code - BNC27002 (T)

(Semester II)

Library
Brainware University
398, Ramkrishnapur Road, Barasat
Kolkata, West Bengal-700125

Full Marks : 40

Time : 2:0 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 10=10

1. Choose the correct alternative from the following :

(i) Identify the primary purpose of network scanning and enumeration in cybersecurity.

a) To identify vulnerabilities and gather information about a network

b) To encrypt sensitive data

c) To block unauthorized access to a system

d) To perform penetration testing on a server

(ii) List a common query type in nslookup that retrieves mail server information.

a) A

b) AAAA

c) MX

d) TXT

(iii) Recall the purpose of the back command in Metasploit.

a) To exit the Metasploit console

b) To return to the previous module context

c) To cancel an exploit in progress

d) To reload the Metasploit framework

(iv) Identify how patch management contributes to endpoint security.

a) By encrypting data

b) By addressing software vulnerabilities

c) By monitoring user behavior

d) By scanning network traffic

(v) Choose the importance of authentication and access control in endpoint security.

a) They block all network connections

b) They ensure only authorized users access sensitive data

c) They encrypt all traffic automatically

d) They analyze threats in real time

(vi) Recognize a Man-in-the-Middle (MitM) attack.

a) Malware designed to target endpoints

b) Unauthorized interception of communication between two parties

c) A technique for encrypting data

d) A method to block ransomware

- (vii) Choose the importance of audit logs within the realm of cybersecurity.
- a) Provide evidence of security events and activities
 - b) Facilitate forensic investigations
 - c) Enhance accountability and compliance
 - d) All of these
- (viii) Recall the commonly used technique to convert plaintext into ciphertext for secure communication.
- a) Encryption
 - b) Hashing
 - c) Encoding
 - d) Decoding
- (ix) Choose the additional purpose an Intrusion Prevention System (IPS) has compared to an IDS.
- a) Prevent and block security incidents
 - b) Analyze and report suspicious activity
 - c) Responds to virus
 - d) Investigate security breaches
- (x) State the type of malware designed to monitor and collect information from a user's system without their knowledge.
- a) Rootkit
 - b) Spyware
 - c) Worm
 - d) Ransomware

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Identify the key elements of endpoint security and explain how they contribute to the overall defense against cyber threats. (3)
3. Explain the primary purpose of Metasploit in penetration testing. (3)
4. Illustrate the role of ports in network communication. (3)
5. Apply enumeration techniques to identify vulnerabilities in a target system. (3)
6. Evaluate the security risks associated with injection flaws, sensitive data exposure, and broken authentication in web applications. (3)

OR

Justify the importance of sufficient logging and monitoring in web application security assessments. (3)

Group-C

(Long Answer Type Questions)

5 x 3=15

7. Show how DNSdumpster can be used to gather information about a target domain. (5)
8. Explain the significance of hunting for subdomains in network reconnaissance. (5)
9. Assess the functionalities of the Post module in Metasploit and its significance in post-exploitation activities. (5)

OR

Evaluate the risks and challenges associated with using Metasploit exploits, particularly low-ranking ones. (5)
