1. What is the primary goal of security?

    A) Ensuring confidentiality

    B) Providing availability

    C) Maintaining integrity

    D) All of the above

View answer

Answer: D) All of the above

Explanation: Security aims to ensure confidentiality, availability, and integrity of data and resources.

2. Which of the following is NOT a basic security terminology?

    A) Threat

    B) Intrusion

    C) Exploit

    D) Analysis

View answer

Answer: D) Analysis

Explanation: Threat, intrusion, and exploit are common security terminologies, while analysis is a process.

3. Which security principle focuses on ensuring that information is only accessible to authorized parties?

A) Confidentiality

B) Integrity

C) Availability

D) Authentication

View answer

Answer: A) Confidentiality

Explanation: Confidentiality ensures that information is protected from unauthorized access.

4. Which mathematical theorem states that every composite number has a prime factorization?

A) Fermat's Theorem

B) Euler's Theorem

C) Fundamental Theorem of Arithmetic

D) Chinese Remainder Theorem

View answer

Answer: C) Fundamental Theorem of Arithmetic

Explanation: The Fundamental Theorem of Arithmetic states that every composite number can be expressed uniquely as a product of prime numbers.

5. What is the process of verifying the identity of a user or system?

A) Authorization

B) Authentication

C) Encryption

D) Decryption

View answer

Answer: B) Authentication

Explanation: Authentication is the process of confirming the identity of a user or system.

6. Which security attack involves exploiting vulnerabilities to gain unauthorized access or perform malicious actions?
   A) Denial of Service (DoS)
   B) Man-in-the-Middle (MitM)
   C) Phishing
   D) Exploit

View answer

Answer: D) Exploit

Explanation: Exploits involve taking advantage of vulnerabilities to compromise security.

7. Which mathematical concept is crucial for cryptographic algorithms like RSA?
   A) Prime Number
   B) Modular Arithmetic
   C) Discrete Logarithm
   D) Chinese Remainder Theorem

View answer

Answer: A) Prime Number

Explanation: Prime numbers play a fundamental role in many cryptographic algorithms, including RSA.

8. Which security principle ensures that data is accurate and reliable?

A) Confidentiality

B) Integrity

C) Availability

D) Nonrepudiation

View answer

Answer: B) Integrity

Explanation: Integrity ensures that data remains accurate and unaltered.

9. What type of attack aims to overwhelm a system with excessive traffic, rendering it unavailable to legitimate users?

A) Phishing

B) Spoofing

C) Denial of Service (DoS)

D) Man-in-the-Middle (MitM)

View answer

Answer: C) Denial of Service (DoS)

Explanation: DoS attacks flood a system with traffic, making it inaccessible to legitimate users.

10. Which theorem states that if p is a prime number and a is any positive integer less than p, then a^(p-1) ≡ 1 (mod p)?

A) Fermat's Theorem

B) Euler's Theorem

C) Chinese Remainder Theorem

D) Fundamental Theorem of Arithmetic

View answer

Answer: A) Fermat's Theorem

Explanation: Fermat's Little Theorem is a fundamental theorem in number theory, which has applications in cryptography.

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