- 1. What is the primary goal of security?
 - A) Ensuring confidentiality
 - B) Providing availability
 - C) Maintaining integrity
 - D) All of the above

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

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

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

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 $a^(p-1) \equiv 1 \pmod{p}$?
 - A) Fermat's Theorem
 - B) Euler's Theorem
 - C) Chinese Remainder Theorem
 - D) Fundamental Theorem of Arithmetic

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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