

B.C.A. Sem.-5 Examination

SEC-301

Information Security

March-2025

Time : 2-30 Hours]

[Max. Marks : 70

Instruction: Figures to the right indicate full marks.

Q-1 Answer the following

- (A) What is CBK (Common body of knowledge)? Explain any 5 domain of CBK. [7]
 (B) What is Intellectual property law? Explain Patent, Trademarks and Trade Secrets. [7]

OR

- (A) Explain any five Information Security Principle of success. [7]
 (B) Explain how cyber criminals commit crime. [7]

Q-2 Answer the following

- (A) Discuss operation security principles and operations security process controls. [7]
 (B) What is Physical Security? Explain the administrative control for providing physical security. [7]

OR

- (A) Explain backup and media control in operation security. [7]
 (B) Explain technical control for providing physical security. [7]

Q-3 Answer the following

- (A) Explain transposition encryption method with example [7]
 (B) Explain asymmetric key cryptography. [7]

OR

- (A) Explain hashing function and block ciphers. [7]
 (B) Explain multifactor authentication and biometrics in information security [7]

Q-4 Answer the following

- (A) What is firewall? Explain application level gateway firewall with advantages and disadvantages. [7]
 (B) What is SDLC? Explain subgroups to improve security across the SDLC. [7]

OR

- (A) Explain basic security infrastructure required for network security. [7]
 (B) Explain OSI reference model. [7]

N1165-2

Q-5 Attempt the following (Any Seven)

[14]

1. The method to magnetically erase data from magnetic media is called degaussing. (T/F)
2. _____ is a network authentication protocol named from three headed dog in Greek mythology.
 - a. Single Sign on
 - b. Dial-in services
 - c. Kerberos
 - d. Black hat
3. The CIA triad is often representation by a triangle .(T/F)
4. _____ the process of converting cipher text back into plaintext.
 - a. Encryption
 - b. Hashing
 - c. Decryption
 - d. Compression
5. Single Sign-On (SSO) reduces the need for users to remember multiple passwords.(T/F)
6. Which of the following is not a risk with distributed systems?
 - a. Java Applets
 - b. Firewall
 - c. Software agents
 - d. ActiveX Controls
7. The principle of least privilege in the context of operational security is Users should have access only to the information necessary to perform their duties.(T/F)
8. Which of the following methods provides remote user access to a system while ensuring security?
 - a. Internet Service Provider
 - b. Hashing
 - c. Firewalls
 - d. VPN
9. Two-way hash is a mathematical encryption operation that cannot be reversed.(T/F)
10. If the programmer is restricted from uploading and modifying production software , is an example of
 - a. Separation of duties
 - b. Personal Security
 - c. Rotation of duties
 - d. Least Privilege
11. Which layer of the OSI Reference Model is responsible for routing data between networks?
 - e. Physical Layer
 - f. Network Layer
 - g. Data link Layer
 - h. Transport Layer
12. IPSec performs encryption and authentication.(T/F)