

[A-26]

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SARDAR PATEL UNIVERSITY
EXTERNAL EXAMINATION
B.C.A. – 6th Semester

Subject: Information Security (US06EBCA01)

Date: 01-04-2016

Time: 10:30 AM to 12.30 PM

Total Marks: 70

Q-1 Select the correct answer for the followings:

[10]

1. Traffic analysis is the type of _____ attack.
(a) Active attack
(b) Passive attack
(c) Service attack
(d) Both (a) & (b)
2. _____ is one type of security services.
(a) Data integrity
(b) Authentication
(c) Access control
(d) NonRepudiation
3. _____ threats exploit service flaws in computers to inhibit use by legitimate users.
(a) Information access threats
(b) Access control
(c) Service threats
(d) Non of these
4. _____ is the original message or data that is fed into the algorithm as input.
(a) Plaintext
(b) Encryption algorithm
(c) Secret key
(d) Ciphertext
5. _____ not a type of attack on encrypted messages.
(a) Known plain text
(b) Chosen cipher text
(c) Chosen text
(d) None of above
6. _____ is a mechanism that bypasses a normal security check.
(a) Logic bomb
(b) Trojan horse
(c) Bacteria
(d) Trapdoor
7. Infection mechanism also referred as _____.
(a) Infection spread
(b) Infection vector
(c) Infection propagation
(d) All of above
8. The _____ server in the DNZ needs only list a limited number of public IP addresses.
(a) DNS
(b) NAT
(c) Proxy
(d) Firewall

9. Stateful firewall maintains a _____, which is a list of active connection.
- Routing table
 - Bridging table
 - State table
 - Connection table
10. _____ controls access to service according to which user is attempt.
- Service control
 - Direction control
 - User control
 - Behavior control

Q-2 Write answers for the followings: (ANY Ten) [20]

- Define threat and attack.
- What do you mean by security mechanism and security services?
- Define information access threats and service threats.
- What is cryptography? Give name of its component?
- What are the types of attacks on encrypted message?
- Differentiate public key and private key.
- Define virus and worm.
- What do you mean by misfeasor?
- Write the three parts of computer virus.
- Define digital signature.
- Can we use a secret key to both sign and verify a signature? Justify.
- List types of firewall.

Q-3 [A] Explain active attack in detail? [6]
[B] Write a note on data integrity categories for security services. [4]

OR

Q-3 [A] Explain the network security model in detail? [6]
[B] Explain passive attack in detail? [4]

Q-4 [A] Explain substitution and transposition cipher. [6]
[B] Describe the applications for public – key cryptosystems. [4]

OR

Q-4 [A] Explain the conventional /symmetric encryption principles and model of symmetric encryption. [6]
[B] List and explain categories of cryptography. [4]

Q-5 [A] Explain the term virus kit, macro viruses, e-mail viruses. [6]
[B] Explain in detail trojan horses. [4]

OR

Q-5 [A] Explain all phases during virus lifetime. [6]
[B] Write a short note on backdoor. [4]

Q-6 List the service of the digital signature and explain in detail. [10]

OR

Q-6 What is firewall? Explain need, characteristics and limitations of firewall in detail. [10]

===== Best of luck =====