SARDAR PATEL UNIVERSITY
External Examination-2022 (Regular)
B. Sc. – CA&IT- 6ᵗʰ Semester
US06CHT27 – Information Security

Date: 25-6-2022   Saturday

Time: 10:00 am to 12:00 pm   **Max. Marks – 70**

Q-1 Give answers of following multiple choice questions.   [10]

1 Traffic analysis is the type of _____ attack.
   a) Active Attack   c) Passive attack
   b) Service attack   d) both A & B

2 Which threats exploit service flaws in computers to inhibit use by legitimate users?
   a) Information access threats   c) Service threats
   b) Access Control   d) None of these.

3 Which action is that compromises the security of information owned by an organization?
   a) Service attack   c) Threat
   b) Security Attack   d) Security mechanism

4 The process of attempting to discover the plaintext or key is known as_____.
   a) Stream cipher   c) Cryptanalysis
   b) Cipher text   d) Block cipher

5 The _____ performs various substitutions and transformations on the plaintext.
   a) Plaintext   c) Secret Key
   b) Encryption Algorithm   d) Cipher Text

6 _____ is a person who is authorized for access but misuses his or her privileges.
   a) Masquerader   c) Misfeasor
   b) Clandestine user   d) None of these

7 IDS stand for _____.
   a) Instruction Detection System   c) Intruder Detection System
   b) Intrusion Detection System   d) None of these

8 Stateful firewall maintains a _____, which is a list of active connection.
   a) Routing table   c) Bridging table
   b) State table   d) Connection table

9 The _____ server in the DNZ needs only list a limited number of public IP addresses.
   a) NAT   c) DNS
   b) Proxy   d) Firewall

10 _____ controls how particular services are used.
   a) Service control   c) Direction control
   b) User control   d) Behavior control

Q-2 Fill in the blanks and True – False.   [08]

1 A _____ threat which intercept or modify data on behalf of users who should not have access to that data.

2 Cryptography is also known as _____

3 _____ is an individual who is not authorized to use the computer.

4 _____ controls access to service according to which user is attempt.

5 Data Integrity is one type of Security services. (True / False)

6 The exact substitutions and transformations performed by the algorithm depend on the Secret key. (True / False)

7 Trojan Horse is a mechanism that bypasses a normal security check. (True / False)

8 VPN server is a server that creates a secure tunnel connection. (True / False)

[P. T. O.]

Q-3 Write down the answer of the following short question. (Any Ten) [20]
1 Define threat and attack.
2 Define information access threats and service threats.
3 Define passive attack and active attack.
4 What is cryptography? Give name of its component?
5 Give the classification of cryptographic system in short.
6 What are the principles of Symmetric/conventional encryption?
7 Define: Virus and Worm
8 Give two examples of software threat that replicates it.
9 What do you mean by dormant phase and propagation phase during virus lifetime?
10 List types of firewall.
11 Write limitations of firewall.
12 What is circuit level gateway?

Q-4 Give the answers of following questions. (Any 4) [32]
1 Explain the network security model in detail.
2 List and explain categories of security services.
3 Explain the conventional /symmetric encryption principles and model of symmetric encryption.
4 Explain substitution and transposition cipher.
5 Explain different nature of viruses in detail.
6 Write a brief note on Intruders and Backdoor.
7 Write comparison between conventional and digital signature.
8 What is firewall? Explain characteristics as well as need of firewall in detail.

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