

[129/A-29]

SEAT No. \_\_\_\_\_

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SARDAR PATEL UNIVERSITY

T.Y.B.C.A. (6<sup>th</sup> Semester) (CBCS) (Reg. & NC) Examination 2019

US06EBCA01 || Information Security

Friday, 29<sup>th</sup> March 2019

02:00 pm to 04:00 pm

Marks: 70

**Q:1 Select an appropriate answer for the following. [10]**

1. The \_\_\_\_\_ attacks are in nature of eavesdropping on, or monitoring of transmission.  
(a). Passive Attack (b). Active Attack (c). Service Attack (d). Both A & B
2. Which one is the category of the active attack?  
(a). Passive Attack (b). Masquerade (c). Traffic Analysis (d). Both A & C
3. The \_\_\_\_\_ control is the ability to limit and control the access to host system and applications via communication links.  
(a). Authentication (b). Active & Passive (c). Access (d). None of these
4. Cryptography is also known as  
(a). Secret Writing (b). Stream Writing (c). Plaintext Writing (d). None
5. The \_\_\_\_\_ performs various substitution and transformations on the plain text  
(a). Plaintext (b). Encryption Algorithm (c). Secret Key (d). Cipher text.
6. \_\_\_\_\_ is the scrambled message produced as output  
(a). Plaintext (b). Encryption Algorithm (c). Cipher text (d). Secret Key.
7. When \_\_\_\_\_ are executed, it may produce one or more copies of itself to be activated later on the same or some other system.  
(a). Logic Bomb (b). Back Doors (c). Boot Programs (d). Worms
8. What the virus does besides spreading is known as  
(a). Triggering (b). Dormant (c). Infection Vector (d). Payload
9. \_\_\_\_\_ control show particular services are used  
(a) Service Control (b) Direction Control (c) Behavior Control (d) User Control
10. In an IP packet header, the \_\_\_\_\_ is the address of the computer or device that is to receive the packet.  
(a). Source Address (b). Flag (c). Destination Address (d). Total Length

**Q:2 Answer the following questions. (Attempt any ten) [20]**

1. Define threat & attack.
2. List the different types of security services.
3. What is masquerade and replay?
4. Define Plaintext and Cipher text.
5. Difference between substitution and transposition ciphers
6. What are the types of attacks on encrypted message?
7. What do you mean by misfeasor?
8. Define: Logic Bomb and Backdoor.
9. Write different virus classification by target.
10. What is circuit level gateway?
11. Can we use secret key to sign and verify a signature? Justify.
12. List the characteristics of firewall.

(1)

(P.T.O.)

- Q:3 A** What is security attack? Explain in detail with its types? [05]  
**B** List and briefly define categories of security services. [05]

OR

- Q:3 A** Explain the network security model in detail. [05]  
**B** What is the difference between active and passive security threats? [05]

- Q:4 A** Explain Cryptography and Crypto analysis in detail [05]  
**B** Describe the application for public key cryptosystem [05]

OR

- Q:4 A** Explain Conventional / Symmetric encryption principles and model of symmetric encryption. [05]  
**B** Explain Substitution and transposition cipher. [05]

- Q:5** Classify the virus in detail. [10]

OR

- Q:5** Explain the term virus kit, Macro Viruses, Email-Viruses and Types of Email Viruses [10]

- Q:6 A** List and explain 4 general types of firewall use to control access and enforce the security policy. [05]  
**B** Explain how digital signature works? [05]

OR

- Q:6 A** List the services of the digital signature and explain in detail [05]  
**B** What is the difference between packet filtering and Stateful multilayer inspection firewall? [05]