HNDIT3062 - Information and Computer Security

Question - 01

1. Write three major concepts represented by CIA tired.

(3 Marks)

2. Briefly explain the following terms with suitable diagram.
   (Plain text, Cipher text, Encryption, Decryption, Key)

(10 Marks)

3. Define the term “Vulnerability”

(2 Marks)

4. Explain two ways of improving security of online credit or debit card transaction?

(5 Marks)

Question - 02

1. Briefly explain the term “Asymmetric key Encryption” with suitable diagram.

(10 Marks)

2. Briefly explain the term “Authentication” and explain why authentication is important?

(4 Marks)

3. Compare and contrast active and passive attacks and provide one example for each type of attacks.

(2 x 3 = 6 Marks)

Question - 03

1. Malicious code can be classified into two types. Name them with an example for each.

(5 Marks)

2. Briefly explain the action you should take to prevent viruses from your system

(5 Marks)

3. Explain the term “DOS attack” and List type of Dos attack

(7 Marks)

4. Write three functions performed by firewall.

(3 Marks)

Question - 04

1. Name the keys used in for encryption and decryption process in Symmetric and Asymmetric Encryption.

(4 Marks)

2. Name four methods used for distribution of Public Keys.

(4 Marks)

3. Lahiru and Raj are two friends who has obtained public key algorithms from a key distribution Centre. They both have public keys known by everyone, and a private key known only by him. mention which keys they can use in following situations:
   a. Raj wants to encrypt the message using Asymmetric Encryption and send it to Lahiru.
   b. Raj wants to include digital signature for message.
   c. Lahiru wants to decrypt the cipher text he received from Raj, using asymmetric encryption.
   d. Lahiru wants to verify the digital signature of the message he has received from Raj.

(8 Marks)

4. Why message authentication is important? Give three reasons.

(4 Marks)

Question - 05

1. IP Spoofing
2. Routing Information Protocol (RIP) Attacks
3. Email Security
4. Pretty Good Privacy (PGP)
5. Macro Virus

(5 x 4 = 20 Marks)