**12425**

**3 Hours / 70 Marks**   Seat No. ☐☐☐☐☐☐☐☐

***Instructions :***   (1)   All Questions are *compulsory.*

(2)   Answer each next main Question on a new page.

(3)   Illustrate your answers with neat sketches wherever necessary.

(4)   Assume suitable data, if necessary.

**Marks**

**1.**   **Attempt any FIVE of the following :**                                   **10**

(a)   Write need of security. (any two points)

(b)   List different types of attacks.

(c)   List any two limitations of firewall.

(d)   What is Kerberos ?

(e)   Define (i) Internet (ii) Intranet.

(f)   Write importance of cyber security.

(g)   List out safety measures against cyber security threats. (any two)

**2.**   **Attempt any FOUR :**                                                      **12**

(a)   Compare Intruder & Insider (any 4 points)

(b)   Explain terminologies used in stenography. (any two)

(c)   Explain monoalphabetic cipher.

(d)   Explain SSL architecture.

(e)   Write steps involved in web authentication process.

3. **Attempt any FOUR :** 12

   (a) Explain Denial of service attack.

   (b) Explain Brute force attack.

   (c) Explain rules for strong password setting.

   (d) Explain impact of malware on security.

   (e) Explain finger print mechanism for authentication of user.

4. **Attempt any THREE :** 12

   (a) Describe Diffie-Hellman key exchange algorithm.

   (b) Explain the way by which email security is achieved.

   (c) Describe authorization model.

   (d) Describe the concept of applying Tunneling method for data transmission.

   (e) Differentiate between Symmetric & Asymmetric cryptography (any 4 points).

5. **Attempt any THREE :** 12

   (a) Consider a plain text message 'I AM A STUDENT', encrypt it with the help of Rail Fence technique.

   (b) Write the steps of privacy setting to web browser.

   (c) Draw neat labelled diagram of VPN.

   (d) What is the need of firewall ? List and explain types of firewalls.

   (e) Explain two advantages and two disadvantages of
       (i) Retina scan
       (ii) Voice patterns.

6. **Attempt any TWO :** 12

   (a) Describe the steps and perform simple column transposition technique on following with column size 6 and read output with order of column as 4, 6, 1, 2, 5, 3, "COME HOME TOMORROW".

   (b) Write steps to set permission to files and folders.

   (c) Describe how access control model works & types of permission.

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