

314319

24225

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
  - (2) Illustrate your answers with neat sketches wherever necessary.
  - (3) Figures to the right indicate full marks.
  - (4) Assume suitable data, if necessary.

**Marks**

**1. Solve any FIVE :**

**5 × 2 = 10**

- (a) State two examples of active sniffing used for Information Security.
- (b) State the need of Information Security.
- (c) List any two different types of authentications.
- (d) List any two preventive measures used for dumpster diving.
- (e) Enlist any four applications of cryptography.
- (f) Define “Digital Signature” for authentication in Information Security.
- (g) State any two functions of Honeypot used for fake information.

**2. Solve any THREE :**

**3 × 4 = 12**

- (a) Explain the working of biometric system with labelled diagram.
- (b) Compare symmetric cryptography and asymmetric cryptography. (Any four Parameters)
- (c) State four prevention methods used to prevent Man-in-Middle Attacks (MIM).
- (d) State four commands used in SMTP.



**3. Solve any THREE :****3 × 4 = 12**

- (a) State Keyloggers. Enlist four preventions against Keyloggers.
- (b) State four types of electronic user authentication services.
- (c) Explain the detail steps used in “Digital Signature Verification” with neat labelled diagram.
- (d) Explain three main types of cyber laws used in (i) Property (ii) Individual (iii) Government.

**4. Solve any THREE :****3 × 4 = 12**

- (a) Explain the working of “Denial of Service Attack” with neat label diagram.
- (b) Define Piggybacking. How to prevent it ?
- (c) Convert plaintext into ciphertext by using simple columnar technique of “ALL THE BEST FOR MSBTE EXAM”.
- (d) Enlist the two properties of Secure Hash Functions and explain it in details.
- (e) State the working of Circuit Level Gateway (Firewall) with neat label diagram.

**5. Solve any TWO :****2 × 6 = 12**

- (a) Define Substitution Techniques used in Information Security. Explain the working of algorithm “Modified Version of Caesar Cipher” with example.
- (b) Explain the working of the MD5 Algorithm with steps (i) Append Padding bits (ii) MD buffer (iii) Process each 512-bit block.
- (c) Define Hacking. Explain five different types of hackers.

**6. Solve any TWO :****2 × 6 = 12**

- (a) Explain basic principles of Information Security with labelled diagram.
  - (b) Explain working of Steganography, advantages and disadvantages of steganography.
  - (c) Explain Host base IDS (HIDS) and Network base IDS (NIDS) with suitable diagram.
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