

22620

22232

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. Attempt any FIVE of the following :**

**10**

- (a) Compare virus and logic bomb. (any two points).
- (b) Identify any four individual user responsibilities in computer security.
- (c) Define following terms :
  - (i) Cryptography
  - (ii) Cryptology
- (d) Construct digital signature using cryptool.
- (e) List any two types of active and passive attacks.
- (f) State any two policies of the firewall.
- (g) List any four types of cybercrimes.

**2. Attempt any THREE of the following :**

**12**

- (a) Describe CIA model with suitable diagram.



- (b) Define following with suitable example :
  - (i) DAC
  - (ii) MAC
- (c) Differentiate between symmetric and asymmetric key cryptography. (any four points)
- (d) Explain steganography technique with suitable example.

**3. Attempt any THREE of the following : 12**

- (a) Describe piggy backing and shoulder surfing.
- (b) Convert plain text into cipher text by using Simple columner technique of the following sentence :  
“Maharashtra State Board of Technical Education”
- (c) State any four difference between Firewall and Intrusion Detection System.
- (d) Describe any four password selection criteria.

**4. Attempt any THREE of the following : 12**

- (a) Convert the given plain text, encrypt it with the help of Caesar’s cipher technique.  
“Network and Information Security”.
- (b) Demonstrate configuration of Firewall setting windows operating system.
- (c) Describe DMZ with suitable diagram.
- (d) Describe PGP with suitable diagram.
- (e) Find the output of the initial permutation box when the input is given in hexadecimal as

0 × 0003    0000    0000    0001

**5. Attempt any TWO of the following : 12**

- (a) Describe the following terms :
  - (i) Assels
  - (ii) Vulnerability
  - (iii) Risks
- (b) Describe network based IDS with suitable diagram.
- (c) Describe COBIT framework with neat diagram.

**6. Attempt any TWO of the following : 12**

- (a) Describe any three phases of virus with suitable example.
  - (b) Describe 'Kerberos' protocol with suitable diagram.
  - (c) Describe following terms :
    - (i) Packet filter Firewall
    - (ii) Application gateway
    - (iii) Circuit gateway
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