



17518

21415

3 Hours/100 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**.
  - (5) Mobile Phone, Pager and any other Electronic Communication devices are **not** permissible in Examination Hall.
  - (6) Preferably, write answer in **sequential** order.

**MARKS**

1. A) Attempt **any three** : **(3×4=12)**
- a) State pillar of information security. Describe with neat diagram.
  - b) With respect to information security define following term :
    - 1) Trust computing base
    - 2) Standard
    - 3) Security policy.
  - c) Define following with diagram :
    - 1) Encryption
    - 2) Decryption
    - 3) Cipher Text.
  - d) Stating mean of term "Cyber Crime". List different type of cyber crime and explain any two.
- B) Attempt **any one** : **(1×6=6)**
- a) Give classification of information. Describe different criteria for information classification.
  - b) Define Risk. Describe how risk is managed for information security.
2. Attempt **any two** : **(2×8=16)**
- a) Define security. Describe different type of securities in organization.
  - b) Consider plain text "TEAM" and key as "HILL". Convert given plain text into Cipher text using Hill Cipher. Write step by step procedure.
  - c) Describe IT Act, 2008.

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3. Attempt **any four** : **(4×4=16)**
- List confidentiality and integrity models. Explain Bell-Lapadula model of confidentiality.
  - Define term :
    - Interruption
    - Interception
    - Fabrication
    - Modification.
  - Describe Ring of trust for single system and for networking.
  - Describe the term digital steganography with neat diagram.
  - Describe the term hacker, cracker, mail bomb and software privacy.
4. A) Attempt **any three** : **(3×4=12)**
- Describe any four type of protection mechanism in TCB.
  - Define Access Control. Draw block diagram of Biometric access control and explain.
  - Describe the term TSEC.
  - Describe any four protocol used for authentication.
- B) Attempt **any one** : **(1×6=6)**
- Describe classical encryption techniques.
  - Describe play fair cipher and describe step by step encryption of plain with example.
5. Attempt **any two** : **(2×8=16)**
- State importance of data recovery. State procedure to recover the deleted file.
  - Describe ITIL frame work.
  - Explain transposition cipher techniques with example.
6. Attempt **any four** : **(4×4=16)**
- How cyber crime are investigated ?
  - What is access control ? List types of access control. Describe any one.
  - Describe Clark Wilson model of integrity.
  - Explain the following :
    - Authorization
    - Authentication.
  - Describe double columnar transposition cipher technique with example. Also state criteria for selecting keyword.
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