P3985

[5561]-689

B.E. (Computer Engineering)
INFORMATION AND CYBER SECURITY
(2015 Pattern) (Semester - II) (410251)

Time : 2½ Hours]   *[Max. Marks : 70*

Instructions to the candidates:
  1)   All questions are compulsory.
  2)   Figures to the right side indicate full marks.

Q1) a) List and explain various elements of Information security.   **[5]**

  b) Using Hill Cipher encrypt the message 'ESSENTIAL'. The key for encryption is 'ANOTHERBZ'.   **[5]**

OR

Q2) a) What is steganography? What are the applications and limitations of steganography?   **[5]**

  b) Use Transposition Cipher to encrypt plain text 'I Love my India' and use the key 'HEAVEN'.   **[5]**

  [Use single columnar transposition]

Q3) a) Discuss elliptic curve cryptography in detail.   **[5]**

  b) What is block Cipher? Explain counter mode of block Cipher.   **[5]**

OR

Q4) a) What is authentication? Explain various methods authentication.   **[5]**

  b) Explain working of AES in detail.   **[5]**

Q5) a) Discuss the working of IPSec. What are the benefits of IPSec.   **[6]**

  b) What is VPN? Explain types of VPN.   **[6]**

  c) Compare PGP, MIME and S/MIME.   **[6]**

OR

Q6) a) Differentiate between IP-V4 and IP-V6. **[4]**

b) Explain secure socket layer handshake protocol in detail. **[7]**

c) Explain ISAKMP protocol of IPSec with header format. **[7]**

Q7) a) What are the various types of firewall. Discuss limitations of firewall. **[8]**

b) Explain any two password management practices. **[4]**

c) What is trusted system. **[4]**

OR

Q8) a) Explain need and challenges of intrusion detection system. Define signature based IDS. **[8]**

b) What is access control security services. **[4]**

c) Explain packet filtering firewall. **[4]**

Q9) a) Explain personally identifiable information PII. Describe PII impact levels with examples. **[8]**

b) What is cyber stalking? How to identify and detect cyber stalking. **[8]**

OR

Q10) a) What are different phases of cyber forensics? Explain with suitable diagram. **[8]**

b) Discuss PII confidentiality safeguards. **[8]**

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