B

M.C.A. DEGREE IV SEMESTER EXAMINATION MAY 2015

CAS 2404 SECURITY IN COMPUTING

(Regular & Supplementary)

Time: 3 Hours   Maximum Marks: 50

PART A

(Answer *ALL* questions)

$(15 \times 2 = 30)$

I. (a) Explain crackers.
    (b) Discuss on some ways by which we can enhance the controls or countermeasures against the methods of defense in security.
    (c) Mention the advantages and disadvantages of Caesar cipher.

II. (a) Discuss on the security of DES algorithm.
     (b) Compare secret key and public key encryption.
     (c) Explain trapdoors with an example.

III. (a) Explain Bell-La Padula confidentiality model.
      (b) Explain the one-time password and why it is very important for authentication.
      (c) Mention the key features of a trusted operating system.

IV. (a) What is a firewall?
     (b) Mention the requirements for secure e-mail communication.
     (c) Mention the denial of service attack.

V. (a) Mention the different steps in risk analysis.
    (b) Explain the internet security policy.
    (c) What are the procedures for registering a patent?

PART B

$(5 \times 4 = 20)$

VI. Briefly discuss the security goals and vulnerabilities in a computer system.

OR

VII. Explain the transposition and substitution ciphers with examples.

VIII. Explain the different steps involved in AES algorithm.

OR

IX. Discuss on various controls which can be given against programme threats.

X. Explain the different methods which are using for memory and address protection.

OR

XI. Discuss on various assurance methods which can be applied to avoid the potential vulnerabilities in a system.

XII. Explain an intrusion detection system.

OR

XIII. Explain separation helps to implement multilevel security for databases.

XIV. Explain how we can write a useful and effective security policy for an organization.

OR

XV. Explain ethical reasoning with examples of ethical principles.

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