67245

MCA 5th Semester (With New Notes)

(Non CBCS)

Examination – December, 2018

COMPUTER SECURITY

Paper : MCA-505

Time : Three Hours]   *[Maximum Marks : 80*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Question No. 1 will be *compulsory.* In addition to compulsory question, student will have to attempt *four* more questions selecting *one* question from each Unit.

1. Answer the following questions :   2 × 8 = 16

   (a) What is a Caesar cipher ?

   (b) Differentiate between plaintext and ciphertext ?

   (c) How can one be sure that a program is secure ?

   (d) Why is user authentication important ?

(e) What do you understand by sensitivity of data ?

(f) What do you understand by Intrusion ? How can we detect it ?

(g) Which Indian law discusses the security of information ?

(h) Why Ethics are important for any industry ?

UNIT – I

2. (a) How does Substitution ciphers different from the transposition ciphers ? Explain giving suitable examples. 6

(b) Explain the AES algorithm and its steps. 10

3. (a) What is the process of encryption-decryption ? Diagrammatically explain the process of Private Key encryption. 8

(b) What are the characteristics of making a "Good" Encryption Algorithm. 8

UNIT – II

4. What are the major issues to be dealt with while designing a trusted operating system ? 16

5. (a) How can we secure our data in Local Area Network ? Define virus and describe various virus spreading mechanism. 8

(b) Describe different mechanisms that can be used for user authentication. 8

UNIT – III

6. What are the security requirements of databases ? Explain the importance of each requirement. 16

7. What do you understand by log of user accesses ? What is its use in security of databases ? Explain. 16

UNIT – IV

8. What are ethics ? Are they related to laws of computer security ? Discuss its importance in the growth of any organization. 16

9. (a) What are software failures ? How can we check the reliability of a software ? 8

(b) How does the rights of employees and employers inter-related ? Does it affect the working in an organization ? Discuss. 8

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