

Roll No.

67197

MCA 4th Semester CBCS Scheme

w.e.f. 2017-18

Examination – May, 2019

COMPUTER SECURITY

Paper : 17MCA34DB2

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 : Attempt *five* questions in all, selecting *one* question from each Unit. Question No. 1 is *compulsory*. All questions carry equal marks.

1. (a) What are the causes and effects of viruses ?
- (b) What is the principle of RSA algorithm ? Explain its working.
- (c) Differentiate between Block Ciphers and Stream Ciphers.
- (d) How are copyrights different from intellectual proprietary rights ?

- (e) What are the main characteristics of AES ? Discuss.
- (f) What is data mining security ? Illustrate.
- (g) Why people may be reluctant in using biometrics for authentication ? How this reluctance can be overcome ? Discuss.
- (h) Write a set of rules combining the secrecy controls of the Bell-La Padula model with the integrity controls of the Biba model. $8 \times 2 = 16$

UNIT – I

- 2. (a) What is cryptography ? What are important methods/techniques used for cryptography ? Discuss. 8
- (b) What is computer security ? What do you mean by security problem in computing ? Illustrate. 8
- 3. Explain the following : $2 \times 8 = 16$
 - (a) Methods of Defense
 - (b) Computer Criminals

UNIT – II

- 4. (a) What are targeted malicious codes ? What are its different types ? Illustrate their relevance. 8
- (b) What do you mean by trusted operating system ? What characterizes a good trusted operating system ? Explain. 8
- 5. (a) What are different security methods for an operating system ? Illustrate. 8

- (b) What do you understand by security models ? What is the purpose of these models ? Explain two popular models highlighting properties that characterize these models. 8

UNIT – III

- 6. (a) What are firewalls ? What are its different types ? How do these help in achieving security ? Illustrate. 8
- (b) What are IDSs ? What are its types ? What are their goals ? Discuss. 8
- 7. (a) What are various levels of protection that users might apply to code or data ? Illustrate. 8
- (b) What are multilevel databases ? What is the purpose of encryption in a multilevel secure DBMS ? Discuss. 8

UNIT – IV

- 8. (a) What do you mean by a security plan ? What are the factors that should be considered when developing a security plan ? Discuss. 9
- (b) What are organizational security policies ? Discuss their relevance in the current scenario. 7
- 9. (a) What are ethical issues in computer security ? Illustrate. 8
- (b) What do you understand by protection for computer objects ? Compare Copyright, Patent and Trade Secret Protections. 8