

TED (10) – 4079/5059

Reg. No.

(REVISION— 2010)

Signature

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2017

INFORMATION SECURITY

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I Answer all questions in one or two sentences. Each question carries 2 marks.

1. Name the four computer system resources.
2. What is cryptanalysis ?
3. List the two steps in user identification.
4. What is a logic bomb ?
5. Define denial of service (DoS).

(5×2 = 10)

PART — B

(Maximum marks : 30)

II Answer any *five* of the following questions. Each question carries 6 marks.

1. Explain stream ciphers.
2. What are the six requirements of a hash function ?
3. Write any six physical characteristics used in biometric authentication.
4. Explain the three logical components of Intrusion Detection System (IDS).
5. What is Network-based Intrusion Detection System ? Which are the two types of sensors deployed in an NIDS ?
6. How does a Denial of Service attack on system resources affect the information system ?
7. What are the limitations of firewalls ?

(5×6 = 30)

PART — C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks.)

UNIT — I

- III (a) What are the three commonly used symmetric block encryption algorithms ? 9
 (b) Explain public key certificate. 6

OR

- IV (a) What is symmetric encryption ? What are the five ingredients of a symmetric encryption scheme ? 9
 (b) Which are the four threat consequences of attacks to an information system ? 6

UNIT — II

- V (a) Explain any five vulnerabilities of password based authentication. 10
 (b) Describe the process of remote user authentication using passwords. 5

OR

- VI (a) What are the three types of access control policies ? 9
 (b) Discuss the three types of authentication protocols used in smart cards. 6

UNIT — III

- VII (a) Which are the functional components of an Intrusion Detection Exchange Format ? 9
 (b) Which are the three classes of intruders ? 6

OR

- VIII (a) Explain Honey pots with a sample deployment. 9
 (b) What is a computer virus ? List the three parts of a virus. 6

UNIT — IV

- IX (a) List any eight characteristics of a bastion host. 8
 (b) Explain reflection attacks. 7

OR

- X (a) Explain amplification attacks with figure. 9
 (b) Discuss how firewalls are placed in virtual private networks. 6