

FACULTY OF ENGINEERING

B.E. 4/4 (CSE) I – Semester (Main) Examination, Dec. 2014 / Jan. 2015

Subject: Information Security

Time: 3 Hours

Max.Marks: 75

Note: Answer all questions from Part A. Answer any five questions from Part B.

PART – A (25 Marks)

- 1 What are the three types of data ownership?
- 2 Draw the 3-D NSTISSC model of security and discuss briefly.
- 3 How is a policy different from a law?
- 4 What is Finger printing?
- 5 What is a timing attack?
- 6 What constitutes a security perimeter?
- 7 What is the operating principle of a Message Authentication Code?
- 8 In the context of a cipher, discuss confusion and diffusion?
- 9 What is a negative feedback loop?
- 10 What are the requirements of a digital signature?

PART – B (50 Marks)

- 11 Discuss in detail the different characteristics of information from the information security point of view.
- 12 List and describe briefly all the different types of attacks on information systems.
- 13
 - a) What is a VPN? Differentiate between tunnel mode and transport mode.
 - b) Discuss in detail different Fire Wall architectures.
- 14
 - a) Explain how the weighted factor analysis worksheet is used in prioritizing assets.
 - b) Given that an asset has a value of 100 and has one vulnerability with a likelihood of 0.3 with current control that addresses 60% of its risk, find the risk value. Assume that the data are 90% accurate.
- 15
 - a) Write briefly about the different cipher methods that are available.
 - b) Discuss briefly about any two protocols for secure communications.
- 16 Describe the technical and non technical aspects of information security implementation in detail.
- 17 Write short notes on:
 - a) Security considerations for temporary and contract employees
 - b) Types of intrusion detection systems
 - c) Defense in depth.
