

MIT

**SOUTH EASTERN UNIVERSITY OF SRI LANKA**

**THIRD EXAMINATION IN BACHELOR OF SCIENCE IN MANAGEMENT AND  
INFORMATION TECHNOLOGY - 2010/2011**

**SEMESTER-1, JULY / AUGUST -2012**

**MIT 3153 – Information System Security**

Answer all questions

Time: 3 Hours

**Question 01**

- i. Explain the importance of information system security within an organization. (05 Marks)
- ii. Explain what you understand about the following terms with respect to Information System Security (ISS):
  - a. Interception
  - b. Interruption
  - c. Modification
  - d. Fabrication
- iii. Explain the differences between Encryption and Hashing with appropriate examples. (04 Marks)
- iv. Briefly explain the following terms. (07Marks)
  - a. Algorithms
  - b. RSA
  - c. Authentication
  - d. Denial of service
  - e. Covert Channels
  - f. Kerberos
  - g. PGP

**(Total = 20 Marks)**

### Question 02

- i. Discuss how a 'DOS' attack works and the types of DOS attack. (06 Marks)
- ii. Discuss the advantages and disadvantages of Stream and Block encryption algorithms. (06 Marks)
- iii. Differentiate the followings;
  - a. Symmetric Key Cryptography – Asymmetric Key Cryptography
  - b. Program Security – Operating System Security
  - c. MAC – DAC
  - h. Confusion – Diffusion

(08 Marks)

**(Total = 20 Marks)**

### Question 03

- i. “The security features of ordinary operating systems addresses several particular functions that involve computer security”. Explain this statement. (06 Marks)
- ii. Briefly explain the term “Security Policies” with suitable example. (04 Marks)
- iii. Explain how viruses gain control of different programs. (05 Marks)
- iv. Explain the term ‘Virus Signatures’ with example. (05 Marks)

**(Total = 20 Marks)**

### Question 04

- i. Briefly explain the issues of the security plan in administrative security. (05 Marks)
- ii. Explain the SSL Record Protocol Operation and make a list of the SSL Record Protocol Services. (05 Marks)

(05 Marks)

- iii. Briefly explain the Secure Electronic Transactions Components. (05 Marks)
- iv. Explain the modes of operation in IPsec. (05 Marks)

**(Total = 20 Marks)**

**Question 05**

- i. "Everyone acknowledges that a computer crime has been committed, and computer crime is hard to prosecute". Analyze the reasons for the situation in terms of this statement. (08 Marks)
- ii. Discuss the importance of Database Security in an organization with the help of real world examples and suggest how they could be prevented from those security issues. (08Marks)
- iii. Briefly define Replay Attacks and discuss how to prevent Replay Attacks. (04Marks)

**(Total = 20  
Marks)**

**\*\*\*END\*\*\***