

SOUTH EASTERN UNIVERSITY OF SRI LANKA

**THIRD EXAMINATION IN BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY
FOR MANAGEMENT STUDIES 2009/2010**

SEMESTER-1, AUGUST-2011

ITMS 3153 – Information System Security

Answer all questions

Time: 3 Hours

Q 01.

- i. Explain different goals of information security within an organization. (02 Marks)
- ii. Differentiate the terms a threat, vulnerability, and a risk. (03 Marks)
- iii. Explain the differences between encryption and hashing. (03 Marks)
- iv. Briefly explain the following terms. (12Marks)

 - a. Cryptography
 - b. CRL
 - c. Masquerade
 - d. Virus Signatures
 - e. Covert Channels
 - f. S/MIME
 - g. Dual Signatures
 - h. PGP

(Total = 20 Marks)

Q 02.

- i. State at least four (04) Shannon's Characteristics of "Good" Ciphers. (04 Marks)
- ii. Are DES and AES stream or block ciphers? Explain. (02 Marks)
- iii. Differentiate the followings; (10 Marks)

 - a. Symmetric – Asymmetric
 - b. Stream Ciphers - Block Cipher
 - c. Secret Key - Public Key
 - i. Confusion – Diffusion
 - j. Phishing - Spoofing

- iv. Define Replay Attacks and discuss how to Prevent Replay Attacks. (04 Marks)

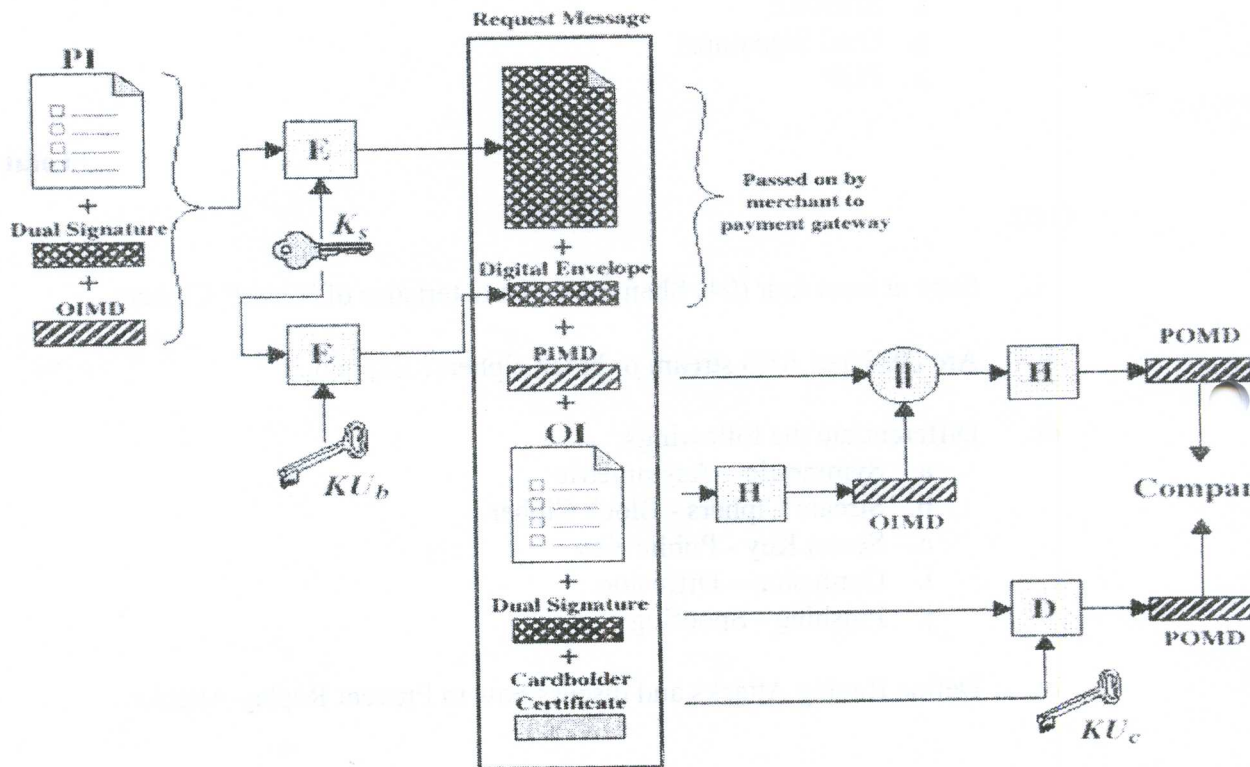
(Total = 20 Marks)

Q03.

- i. Discuss the security features of the operating system that can be used to simplify the design of the database management system. (04Marks)
 - ii. Explain the Security Requirements of the Database Security. (04Marks)
 - iii. Tabulate the Kinds of Malicious Codes and its Characteristics. (05 Marks)
 - iv. Explain the Virus Effects and Causes. (04 Marks)
 - v. Explain the modes of operation in IPsec. (03 Marks)
- (Total = 20 Marks)**

Q 04.

- i. Briefly explain the seven issues of the security plan in administrative security. (04 Marks)
- ii. Briefly describe each stacks of the SSL Architecture. (08 Marks)
- iii. Explain what you mean by SET, each components of the SET, and explain the sequences of SET Transections. (04 Marks)
- iv. Discuss the following figure with suitable example.



(04 Marks)
(Total = 20 Marks)
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05.

i. Explain the term security breach.

(02 Marks)

ii. List two causes of trapdoors.

(04 Marks)

iii. Critically analyse an information security breach and violation in the computing filed in the recent past and how they were resolved the issues.

(14 Marks)

(Total = 20 Marks)