



**UNIVERSITY OF COLOMBO, SRI LANKA**

**Faculty of Management and Finance**

**Postgraduate and Mid-career Development Unit**

Master of Business Administration in International Business 2015/2017 Programme

(Trimester III) Examination – October, 2016

**MBAIB 5112 - Management Information Systems**

**Three (03) Hours**

Answer **FOUR (04)** Questions in all selecting **Two (02)** Questions each from **Part I** and **Part II**.

This paper consists of **Six (06)** Questions printed in **Four (04)** pages.

Answers for **Part I** and **Part II** should be provided in two separate answer books.

---

**Part - I**

1. i. Describe the connection between organizations, information systems, and business processes.

(10 Marks)

ii. How does a company's use of information systems affect its corporate strategies? Elaborate on this statement with examples.

(15 Marks)

**(Total 25 marks)**

2. i. Describe six elements in the Business Intelligence environment referring to Laudon and Laudon.

(10 Marks)

ii. Suppose that you are evaluating Business Intelligence (BI) software developed by different vendors. Using the six BI elements described in part (i) above, how do you assess whether the software developed by different vendors meet your requirements?

(15 Marks)

**(Total 25 marks)**

3. i. Describe what is an Enterprise Resource Planning (ERP) system.

(10 Marks)

ii. Explain how an ERP system can change business organizations to gain competitive advantage to the business.

(15 Marks)

**(Total 25 marks)**

### **Part - II**

4. i. a. Briefly explain the functionality of the Internet, highlighting its important characteristics.

b. Briefly describe a problem with regard to the Internet Protocol Version 4 (IPv4) and any solution(s) proposed to overcome the said problem.

c. Briefly describe how Sri Lankans get access to the Internet.

(09 Marks)

ii. a. Assume that a business organization requires to obtain a Domain Name for their use. Briefly describe the process to follow to obtain the required Domain Name.

b. What is meant by country code Top Level Domain (ccTLD)?

(06 Marks)

iii. a. Write three (03) advantages of Cloud Computing.

b. What is meant by a Hybrid Cloud?

(06 Marks)

iv. Briefly explain the process of ranking web page documents by the search engines.

(04 Marks)

**(Total 25 marks)**

5. i. a. What is the role of an Operating System (OS) software?

b. Write three (03) examples for OS Software.

(06 Marks)

ii. a. Briefly explain the difference between Freeware and Shareware Software.

b. In the context of computer software, what is the difference between the Source Code and the Object Code?

(06 Marks)

iii. A sales person proposes an Artificial Neural Network (ANN) based application to a traditional payroll system. Briefly describe your concern(s) on that proposal.

(03 Marks)

iv. a. Briefly describe the two main categories of free and open source license types.

b. Describe two (02) methods that you can propose to earn money using free and open source software.

(05 Marks)

v. Briefly explain how one can use Data Mining techniques to take the competitive advantage over traditional methods used in a business environment.

(05 Marks)

**(Total 25 marks)**

6. i. a. What is the difference between Plaintext and Ciphertext?  
 b. Data encryption can be achieved by using a single key or two different keys. Compare and contrast the above two methods for data encryption.

(06 Marks)

- ii. a. What is the role of Message Digest Algorithms in data encryption?  
 b. When you enter a data file (suppose an email) to a Message Digest Algorithm, what would be the output of the Algorithm?

(06 Marks)

iii. Consider the following notations that are related to public key encryption:

	Person A	Person B	Person C
Public Key	$K_{Pub}^A$	$K_{Pub}^B$	$K_{Pub}^C$
Private Key	$K_{Pri}^A$	$K_{Pri}^B$	$K_{Pri}^C$

- a. Explain how 'Person A' can send an encrypted message (M1) to 'Person C' using the above keys.  
 b. If 'Person B' sends an encrypted message (M2) to 'Person C', what keys 'Person B' should use?  
 c. If 'Person B' sends a digitally signed and encrypted message (M3) to 'Person C', what keys 'Person B' should use?

(09 Marks)

iv. What is the role of digital certificate in the context of data encryption?

(04 Marks)

**(Total 25 marks)**