

UNIVERSITY OF COLOMBO, SRI LANKA  
FACULTY OF GRADUATE STUDIES

Masters in Public Administration 2019/2020  
Semester II Examination

**MPA 6206 – Information System Management**

Duration: **Three (03) Hours Only**

Answer **any Four (04)** questions

Total number of questions is 6

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01. Answer **all** sections.

- i. Define the terms 'Data' and 'Information' and explain how 'Data' is converted to 'Information?

**(03 Marks)**

- ii. Explain how disruptive innovations can create markets for new entrants.

**(03 Marks)**

- iii. Three-Tier pyramid model is based on the type of decisions taken at different levels of an organization. Name these **three (03)** tiers and name **one (01)** example type of Information System used in each tier?

**(05 Marks)**

- iv. Compare 'Manual Information Systems' and 'Computer Based Information Systems' with respect to the following parameters:

- a. Cost
- b. Data Security
- c. Confidentiality of data
- d. Accessibility

**(06 Marks)**

- v. ***"Lack of IT infrastructure in a country can negatively affect its development"***. Do you agree with this statement? Justify your answer stating relevant examples.

**(08 Marks)**

02. Answer all sections.

i. Name **two (02)** methods used to ensure the physical security of an Information System?  
**(01 Mark)**

ii. The top-down information security implementation approach is used by the top management of an organization. Name **two (02)** advantages of top-down approach over bottom-up approach?

**(03 Marks)**

iii. ABC (Pvt) Ltd is a company which conducts its operations **entirely online**. The company offers services to its customers through a website which is available 24/7/365 days with no downtime. One of the main reasons for the popularity of ABC (Pvt) Ltd is its uninterrupted availability. Revenue of the website for week is Rs. 13,44,000.00. Now, imagine that the web server hosting the website fails and is down for **four hours and thirty minutes**. The cost for the repair was of Rs. 25,000.00.

- a. In this scenario, what is the loss of revenue for ABC (Pvt) Ltd?
- b. Calculate the loss of tangible assets?
- c. Do you believe that there is a loss for ABC (Pvt) Ltd in terms of intangible assets? Justify your answer.

**(09 Marks)**

iv. Consider below mentioned scenarios and classify the actions of the individuals based on the classifications, **very ethical/ethical/neither ethical nor unethical/unethical /very unethical**. State reasons for your selection.

- a. A programmer at a bank realized that she had accidentally overdrawn her current account. She made a small adjustment in the bank's accounting system so that her account would not incur a service charge. As soon as she deposited the necessary funds that made her balance positive again, she corrected the bank's accounting system.

The programmer's modification of the accounting system was:

**(03 Marks)**

- b. Jim is a system administrator for a large multinational firm and was entrusted to install a new software package on the PCs in his organization. The company has not authorized Jim to read other people's files but has the authority to remove any harmful files and software from organizations IT assets. However, in the course of installing the new software to the PC of the fellow employee Martin, Jim accidentally comes across directories with files that have suspicious sounding names. Jim opens a few of the files and finds they contain child pornography. Jim knows this is in violation of company policy and also is against the national laws.

- (1) Jim's action which led to identifying child pornography in computer:
- (2) Jim failing to inform the authorities because Martin is his friend:
- (3) Jim copying those files for future use:

**(09 Marks)**

03. Answer **all** sections.

- i. For what does "WWW" stand for?

**(01 Mark)**

- ii. Answer **both** sections.

- a. Name **four (04)** domains which can be seen in a typical IT infrastructure.

**(04 Marks)**

- b. Define the terms 'Entity' and 'Attribute' using a suitable example.

**(04 Marks)**

- iii. Compare different characteristics of **B2B**, **B2C** and **C2C** eCommerce models with respect to the following parameters:

- a. Value of sales
- b. Length of sales
- c. No of decision makers involved
- d. Complexity

**(08 Marks)**

- iv. Explain how organizations can utilize Information Systems to minimize/neutralize below effects mentioned under 'Porter's Five Forces Model' in order to attain Competitive Advantage (CA).

- a. Threats of new entrants
- b. Bargaining power of the suppliers

**(08 Marks)**

04. Answer all sections.

i. Name **two (02)** input devices and **two (02)** output devices?

(04 Marks)

ii. What is the difference between 'Synchronous' and 'Asynchronous' communication?  
Give **two (02)** examples each for each type of communication.

(05 Marks)

iii. Answer both sections.

a. Name two encryption standards?

(02 Marks)

b. Name **four (04)** types of wireless communications?

(04 Marks)

iv. ***"During the Covid-19 pandemic, online learning played a pivotal role in maintaining uninterrupted knowledge transfer."*** Do you agree with this statement? State reasons for your decision.

(10 Marks)

05. Answer all sections.

i. Name **three (03)** different software development life cycle (SDLC) models.

(03 Marks)

ii. Answer both sections.

a. Name **two (02)** designations of members in an IT operations team.

(02 Marks)

b. Name **four (04)** tasks carried out by a Database Administrator (DBA).

(04 Marks)

iii. Name **two (02)** advantages and **two (02)** disadvantages of "Outsourcing" Information System development process?

(08 Marks)

iv. Answer both sections.

a. Name **two (02)** different tasks carried out by 'Application Software' and 'System Software'?

(04 Marks)

b. Name **two (02)** long term benefits of 'Green Computing'?

(04 Marks)

06. Answer all sections.

i. What are considered as “Threats” to an organization?

**(02 Marks)**

ii. Write short notes on following new trends seen in Information Systems domain.

- a. Augmented Reality (AR)
- b. Artificial Intelligence (AI)

**(06 Marks)**

iii. Describe how ‘Cultural and Language Challenge’ can bring negative effects on Information Systems. State relevant examples to support your answer.

**(08 Marks)**

iv. Describe how Information Systems create value for an organization through following pathways. State examples where necessary.

- a. Increasing productivity
- b. Changing the structure of competition
- c. Benefits to end customers

**(09 Marks)**

**\*\*\*\*\*END OF PAPER\*\*\*\*\***