

# CERTIFIED ACCOUNTING TECHNICIAN LEVEL 1 EXAMINATIONS

## L2.2: INFORMATION SYSTEMS

**MONDAY: 5 JUNE 2017**

### INSTRUCTIONS:

1. **Time Allowed: 3 hours 15 minutes** (15 minutes reading and 3 hours writing).
2. This examination has **seven (7) questions** and only **five (5) questions** are to be attempted.
3. Marks allocated to each question are shown at the end of the question.
4. All iCPAR Examination rules and regulations apply.

*Attempt any five questions*

### **QUESTION ONE**

Kam Computers Ltd, an information technology training company in Butare town has organised a workshop for farmers. Some of the topics for training include types of computers, Central processing unit (CPU) and Memory and Mobile computing. You are an information systems technician and have been selected to make the presentation to the farmers.

#### **REQUIRED:**

Prepare a presentation to the farmers including:

- (a) Description of the different types of computers classified according to processing power. **(8 Marks)**
- (b) Outlining any two functions of the Central processing unit. **(4 Marks)**
- (c) Explaining any two differences between Random Access Memory and Read Only Memory. **(4 Marks)**
- (d) Explaining two reasons why mobile computing is important. **(4 Marks)**

**(Total 20 Marks)**

### **QUESTION TWO**

Inkomoko Ltd in Gikongoro town has for sometime had challenges in record keeping for the company records such as customers' data, business transactions, finances and employees' data.

In consultations with TXL Forensic Ltd, they were advised to change from file based to database management system. You have been invited as an expert in information systems by the management of Inkomoko Ltd to take up the project of establishing the database system to their company.

#### **REQUIRED:**

- (a) (i) Explain to the manager of Inkomoko Ltd the difference between file based system and database management system. **(4 Marks)**
- (ii) Explain any four characteristics of database management system. **(4 Marks)**
- (b) Sensitise the manager and the staff of Inkomoko Ltd on any six benefits of changing from file based approach to database approach. **(12 Marks)**

**(Total 20 Marks)**

### **QUESTION THREE**

Knowledge Management (KM) is asset of processes developed to create, gather, store, maintain, disseminate and apply for firm's knowledge. In Gasagara District, a group of farmers have formed an association to promote coffee growing and marketing. They have set up their secretariat at Nyanza, the provincial capital.

The secretariat is tasked with collecting information about crop yields from the district, prices on the international market. They should further study and record statistics about rainfall, temperature and other weather conditions. More information is required about outlet farmers. All this information is to be analysed and used in making important decisions by the Executive managers of the secretariat. An expert in business systems has advised them to develop an executive support system (ESS) which must have a network because they need to share information with farmers across the district. This dissemination of information is an important component of KM.

## **REQUIRED:**

Explain to the farmers:

- (a) The components of a knowledge management cycle. **(8 Marks)**
- (b) Any three reasons why the secretariat should use Executive Support System. **(6 Marks)**
- (c) Any three reasons why the secretariat should use networks. **(6 Marks)**

**(Total 20 Marks)**

## **QUESTION FOUR**

The world information technology trends have become very vital for almost every human and organizational need. For this therefore, organizations have been conditioned to set up information systems with internet WIFI network to support the efficiency and effectiveness of their activities. However, during system development processes, the professionals and system advise that the system should be developed with strong, dependable and flexible information security and control systems. This is because the computer based systems are vulnerable to threats.

## **REQUIRED:**

As an expert of information system,

- (a) With examples, suggest four reasons why professionals and experts insist that computer based information systems are vulnerable. **(4 Marks)**
- (b) Identify any four common security threats to the information system set up with internet and WIFI network. **(4 Marks)**
- (c) Explain any four business values of information system security and control to the organisation. **(12 Marks)**

**(Total 20 Marks)**

## **QUESTION FIVE**

Kanyarutoke is a successful businessman in Byumba running a number of supermarkets. He has been advised to invest in computerised information systems if he is to achieve better strategic business objectives. Kanyarutoke's son Ntampaka who is a student at Institute of Polytechnique de Byumba informs his father that information systems come with ethical and social considerations.

## **REQUIRED:**

- (a) Explain to Kanyarutoke any three strategic business objectives he can achieve when he uses information systems in his supermarkets. **(6 Marks)**
- (b) Describe to Kanyarutoke four ethical considerations associated with using information systems. **(8 Marks)**
- (c) Briefly describe three negative social impact which can result from use of information systems. **(6 Marks)**

**(Total 20 Marks)**

## **QUESTION SIX**

The residents of Kibimba in Muhanga District started an association called Kibimba Turatsinze Association (KINA) with 150 members which now has grown to 1,000 members. Due to the increase in numbers from 150



to 1,000 members, the association has had challenges of keeping records. For this the general meeting has recommended that the executive committee investigates about information system requirements that can be established to easy storage, control of data, track of transaction and report back in the next meeting.

The executive committee findings show that the system requires computer hardware, software and personnel for proper set up and maintenance so as to have effective and efficient productivity. You are part of the executive committee and you have shared a presentation in which you were given computer software.

**REQUIRED:**

(a) Explain to the members of KINA:

(i) Any four classifications of operating systems that can be used in setting up their information system. **(4 Marks)**

(ii) Any two examples of operating system that KINA can use to establish a networked information system. **(4 Marks)**

(b) Discuss to the members of KINA any three factors that will be considered to acquire the computer software for the information system. **(6 Marks)**

(c) Explain any three ways of caring for computer software for proper functioning of the information system of KINA. **(6 Marks)**

**(Total 20 Marks)**

**QUESTION SEVEN**

Four decades ago, there was no emails internet, mobile marketing, telecommuting or smart phones. Now electronic technology has grown to an extent that communication is instant and huge amounts of information move through emails and internet including business information.

Shema & Sons Enterprise is an upcoming enterprise willing to incorporate electronic technology like E-Commerce, E-business and E-Commerce payment systems in its business.

**REQUIRED:**

(a) Explain to Shema & Sons Enterprises the:

(i) Difference between E-commerce and E-business. **(2 Marks)**

(iii) Meaning of the following terminologies:

- Internet marketing **(2 Marks)**

- Mobile commerce **(2 Marks)**

- Online market place **(2 Marks)**

(b) Describe any three E-commerce payment systems that they can adapt for their transactions. **(6 Marks)**

**(Total 20 Marks)**

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**End of question paper**