

CERTIFIED PUBLIC ACCOUNTANT LEVEL 2 EXAMINATIONS

F2.3: INFORMATION SYSTEMS

THURSDAY: 01 DECEMBER 2016

INSTRUCTIONS:

- 1. Time Allowed: 3 hours 15 minutes (15 minutes reading and 3 hours writing).**
- 2. This examination has seven questions and only five 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

It is extremely important for an organisation to have its information systems integrated so that information can easily flow between its different management levels. For information systems integration to be successful, it is a prerequisite for efficient collaboration within the organisation.

Busasamana Company Ltd (BCL) is a fast growing fast foods company in Nyanza district in the Southern Province of Rwanda. It has automated most of its core activities, and has in place a human resource information system, an accounting information system, a payroll information system, an inventory management information system and an attendance tracking management information system. The company has conceded it has found it very challenging to integrate all these information systems.

REQUIRED:

- (a) From a structural point of view, explain any four generic components of the information systems that BCL has managed to come up with. **(8 Marks)**
- (b) Explain three:
 - (i) Reasons why BCL found it necessary to integrate their information systems. **(6 Marks)**
 - (ii) Challenges experienced by BCL as a result of information systems integration. **(6 Marks)**

(Total 20 Marks)

QUESTION TWO

At different managerial levels, different information systems are deployed to facilitate activities. At management level, managers use decision support systems (DSS) and executive support systems (ESS) to make decisions for the organisation.

REQUIRED:

You are the information systems manager of SIFI group of companies and have been tasked by the managing director to:

- (a) Describe the two information systems highlighted in the scenario above. **(4 Marks)**
- (b) Explain 4 ways the Executive Support System can help in decision making in SIFI group of companies. **(8 Marks)**
- (c) Discuss any four ways information systems may benefit an organisation. **(8 Marks)**

(Total 20 Marks)

QUESTION THREE

Rutsiro Farmers' Group (RFG) is a community initiative that was started a decade ago to boost the economic potential of the people in Rutsiro district. Initially, it mainly supported members by offering good farming education, availing farm inputs, identifying market for their produce in addition to promoting the culture of saving among the members.

As the number of members increased and their activities become diverse, the members resolved at the last annual general meeting to automate their operations. It was felt that the automation would facilitate easy flow of information among the members in the different parts of the district.

You have been recruited, on a short contract by the group's executive board to assist them acquire a suitable information system to manage the increasing operations and also facilitate easy information exchange among the group members. The contract period is six months.

REQUIRED:

Prepare a detailed presentation for the board and management of Rutsiro Farmers' Group:

- (a) Describing the possible factors that might cause the members of Rutsiro Farmers' Group to resist the new system once it is in place. **(10 Marks)**

- (b) Explaining any five expected benefits of the propose information system to Rutsiro Farmers' Group. (5 Marks)
- (c) Suggesting any five necessary precautions to put in place to ensure a continuous and reliable Rutsiro Farmers' Group's information system. (5 Marks)
- (Total 20 Marks)**

QUESTION FOUR

Irunva Construction Company Limited (ICCL) wishes to shift its mode of operation from manual to automatic by use of a computerised system. In its consultations with computer specialists, management was assured that a computerised system requires computer devices, software, personnel and proper maintenance. After the consultation, management resolved to appoint a steering committee to proceed with the project on which you were appointed as the chairperson.

REQUIRED:

- (a) Explain to the members of the committee on the following:
- (i) Meaning of a computerized system. (2 Marks)
 - (ii) The two classifications of the computer software required for a computer system to run. (6 Marks)
- (b) Explain the difference between the following terms as commonly used in end-user packages to enable the committee discuss the choice of software for use in ICCL:
- (i) Software suits and integrated system. (2 Marks)
 - (ii) Off-shelf software and bespoke systems. (2 Marks)
- (c) Explain any four precautions you would advise the committee to put in place to maintain the computer software in a good working conditions. (8 Marks)
- (Total 20 Marks)**

QUESTION FIVE

Mobile commerce (M-Commerce) is the buying and selling of goods and services through wireless handheld devices like personal digital assistants and cellular telephones. It is the delivery of electronic commerce capabilities directly into the hands anywhere, via wireless technology.

Gucuruza Mobile Traders Ltd (GMTL) is a group of individuals trading in various items in the whole of the East African region. Two years ago, they transformed from carrying out business on cash basis to M-commerce with cloud computing applications.

REQUIRED:

- (a) Explain the two characteristics of M-commerce. (2 Marks)
 - (b) Explain three reasons why GMTL opted for M-commerce applications. (6 Marks)
 - (c) Explain three benefits of incorporating cloud computing applications in GMTL's business activities. (6 Marks)
 - (d) Explain three challenges GMTL may experience in executing their businesses through M-commerce. (6 Marks)
- (Total 20 Marks)**

QUESTION SIX

In the early 1970s, Kicukiro Printing Press (KPP) had the highest circulation of the national newspapers in Rwanda and during that time it could satisfy the population in Kigali. But with growing population in the last 10 years or so, there has been a need to boost the production levels to cope with the increasing demand.

A new manager was recruited to revamp the company and he started by introducing information communication technology (ICT) in its operations. With the use of computers, KPP has found new ways of solving problems, increasing productivity, faster processing of newspapers and better ways of storing information.

The basic elements of the ICT in KPP are input, processing, storage and output. Most of the operations in KPP are carried out on microcomputers. You are an information systems technician in KPP.

REQUIRED:

- (a) (i) Discuss four benefits of using computers to KPP as stated in the scenario. (4 Marks)
- (ii) With examples, explain any two elements of a computer system highlighted in the scenario. (4 Marks)
- (b) Highlight any four characteristics of microcomputers (4 Marks)
- (c) Storage devices like hard disks, flash disks and compact disks are important devices in an information system. They are used internally and externally.

REQUIRED:

Explain any four advantages of using external storage devices in KPP. (8 Marks)

(Total 20 Marks)

QUESTION SEVEN

The need for communication and other types of information communication technology (ICT) services is very high. But after natural disasters like earthquakes, floods and tsunamis have occurred, the communication infrastructure has often been damaged making services unavailable. This is because of their centralised control.

Kinazi Sun Technologies (KST) has been an Internet service provider (ISP) to most of the companies that operate in the Eastern region of Rwanda. Their operations were disrupted by the recent earthquake in Tanzania which was felt in the neighboring countries, Rwanda inclusive. Their telecommunication infrastructure was not earthquake resilient and as a result, they have been put out of business since the earthquake affecting their clients' businesses. KST has hired you as their ICT consultant to help them recover their business processes.

REQUIRED:

- (a) Explain to the management of KST the following terms:
 - (i) Telecommunication infrastructure. (2 Marks)
 - (ii) Earthquake resilient telecommunication infrastructure. (2 Marks)
- (b) Identify any four components that KST should have in place in order to deliver normal services to its clients. (4 Marks)
- (c) Explain the steps KST has to take to fully restore telecommunication services and be able to support its clients after the earthquake. (8 Marks)
- (d) Explain any two measures that KST should put in place to ensure continuity of services even when another terrible earthquake occurs. (4 Marks)

(Total 20 Marks)

End of question paper