CERTIFIED PUBLIC ACCOUNTANT

LEVEL 2 EXAMINATIONS

F2.3: INFORMATION SYSTEMS

DATE: TUESDAY, 27 APRIL 2021

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 **Should be** attempted.
3. Marks allocated to each question are shown at the end of the question.
4. Show all your workings where necessary.

QUESTION ONE

The Covid-19 Pandemic has contributed to the boost of use of virtual tools in virtual online meetings and collaborations. This has allowed many companies to continue running their businesses and reach out to their customers.

Required:
a) **Explain the advantages and challenges of virtual team works.** (5 Marks)
b) **Explain the role of IT systems in virtual work.** (5 Marks)

Terracom Ltd is a company specializing in telecommunication services. The company employs many employees with different expertise in its different branches. It is about installing knowledge workers support systems.

Required:
c) **Describe the requirements of knowledge work systems.** (5 Marks)
d) **Explain the virtual reality systems.** (5 Marks)
(Total:20 Marks)

QUESTION TWO

Company ZEBRA Ltd, is a newly established and wants to reinforce its IT equipment by investing huge amounts of money in security. As an IT expert, you are asked to explain some concepts about computer security.

Required:
a) **Define the term cyberwar.** (2 Marks)
b) **Differentiate the hacker and the cracker.** (2 Marks)
c) **Describe the Logic Bomb.** (2 Marks)
d) **Define Trojan Horse.** (2 Marks)
e) **What is a Worm?** (2 Marks)
f) **Explain the wireless security challenges.** (5Marks)

Many employees of ZEBRA Ltd who manipulated computers for long time have reported complaints about backaches and eye issues.
Required:
g) **Explain how ZEBRA Ltd is ethically or morally responsible for poor health working conditions of its employees**. (5 Marks)
(Total:20 Marks)

QUESTION THREE

Albert and Sons Ltd is a carpentry that operates in the Icyerekezo Village. The Founder and Managing Director has diagnosed a lot of issues related to manual processing of customers' orders, wood stock disruption, delays in delivery of finished furniture, loss of customers 'contacts, misunderstanding with customers over the remaining balances for settlement, and so on. The Founder wants to introduce an Information System (IS) for solving these issues.

Required:
a) **Explain to the founder the benefits of its carpentry to have an IS.** (10 Marks)
b) **What managerial challenges will Albert and Sons Ltd face because of the installation of an IS?** (5 Marks)
c) **Explain to Albert and Sons Ltd owners the benefits of using the alternative of cloud computing.** (5 Marks)

(Total:20 Marks)

QESTION FOUR

During the pandemic of Covid-19, many business companies were in lockdown and were not able to work. The government of Rwanda encouraged the use of various technologies available to work from home, to do payments online and so on. Some business companies especially restaurants have changed their business models and turned them into online business models. Those changes have contributed a lot to the development of e-Commerce in the country.

Required:

a) **Explain the major changes that occurred during this Covid-19, that increased the e-Commerce transactions.** (5 Marks)
b) **What do you think are the challenges of e-Commerce in countries like Rwanda?** (5 Marks)
c) **What are the major advantages of doing online businesses over brick-and-mortar businesses during the Covid-19 pandemic?** (5 Marks)
d) **Explain the mobile money term with examples in the EAC region.** (5 Marks)

(Total:20 Marks)

QUESTION FIVE

Company X is specialised in sports apparels manufacturing and has several non-integrated software running in its different departments. As a system analyst, the Director of the company has approached you seeking technical advice regarding an enterprise application implementation.

Required:

a) **Explain to him/her the benefits and challenges of having an ERP or Enterprise Application.** (10 Marks)
b) **What will be the gains of the company by installing a Customer Relationship Management (CRM)?** (5 Marks)
c) **Explain to him/her the pull and push models in the supply chain and advise which one you could recommend for the Company X and why.** (5 Marks)

(Total:20 Marks)

QUESTION SIX

Izuba SACCO is keeping many of its employees' files on the papers and all bank transactions in the books. It is currently encountering many issues related to data consolidation and redundancy and sometimes customers' records are misplaced. As an IT specialist, explain the benefits of having an integrated digital database.

Required:

a) **Explain three ways the files could be organized in the database.** (5 Marks)
b) **Propose a type of database that Izuba SACCO could implement.** (5 Marks)
c) **Explain the Structured Query Language (SQL) and give any SQL statement.**
(5 Marks)
d) **Explain the importance of having Data Quality for Izuba SACCO.** (5 Marks)
(Total:20 Marks)

QUESTION SEVEN

BAHO Ltd has an old information system and would like to implement the installation of a new software product to remain competitive in the horticulture market.

Required:

a) **Explain any 4 organizational changes that could happen in BAHO Ltd due to the installation of new software.** (5 Marks)
b) **Explain the benefits and challenges of software packages.** (10 Marks)
c) **Explain the risks associated with software outsourcing.** (5 Marks)
(Total:20 Marks)