CERTIFIED PUBLIC ACCOUNTANT

FOUNDATION LEVEL 2 EXAMINATIONS

F2.3: INFORMATION SYSTEMS

DATE: TUESDAY 26, AUGUST 2025

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. The question paper should not be taken out of the examination room.

QUESTION ONE

a) Umuringa Ltd is an e-commerce company serving around 1,000 customers worldwide, each with diverse preferences and expectations truly reflecting the idea that one man's meat is another man's poison. As a business, Umuringa Ltd is currently navigating various ethical and social challenges related to its customers choice of concern. These issues require careful attention to ensure that its practices respect the values and concerns of its global customer base while maintaining trust and integrity in the operations.

Required:

As a system specialist, **identify and briefly explain at least FOUR ethical and social issues related to information systems that Umuringa LTD is currently facing.** (4 Marks)

b) Information systems to function effectively, they rely on an infrastructure primarily made up of hardware and related components. As an expert in this field, **discuss the different types of hardware platforms involved in supporting information systems.** (12 Marks)

c) As technology rapidly evolves due to institutional competition and innovation, **organizations** are compelled to adapt to emerging technological trends. **Outline at least FOUR latest trends in hardware platforms.** (4 Marks)

(Total: 20 Marks)

QUESTION TWO

Manzi LTD plans to develop a system using a modular approach to coordinate various functions within the organization. The system is designed to integrate and manage resources across key departments such as accounting, marketing, finance, sales, and human resources each of which contributes to the company's core business activities. This intelligent coordination platform will support more informed decision-making, particularly in the area of resource management.

Required:

a) **Explain FIVE key advantages of implementing supply chain management systems; Highlight how these systems contribute to improving efficiency, reducing costs, enhancing collaboration, and strengthening overall business performance.**(10 Marks)

b) **Outline FOUR key benefits of implementing Enterprise Resource Planning (ERP) systems and briefly explain how they enhance organizational efficiency and support better decision-making across various departments.** (4 Marks)

c) **Briefly explain the advantages that Group Decision Support Systems (GDSS) offer to an organization.** (6 Marks)

(Total: 20 Marks)

QUESTION THREE

The functionality of an Automated Teller Machine (ATM) can be enhanced by integrating both facial recognition and fingerprint detection technologies. This involves equipping the machine with a camera and biometric sensors that automatically capture a client's facial image and fingerprint. The captured data is then compared with the existing records in the system's facial and fingerprint databases. This method is considered one of the fastest and least intrusive forms of biometric identification. It serves two main purposes: firstly, to enhance security by verifying the client's identity through real-time facial and fingerprint comparison; and secondly, to detect and prevent access by unauthorized individuals. If the system identifies a mismatch or suspects a security breach, the ATM can automatically confiscate the card to protect the user's financial information.

Required:

a) **Demonstrate FOUR additional tools and technologies that can be used to safeguard information resources and highlight how each tool contributes to enhancing security and protecting sensitive data from unauthorized access.** (8 Marks)

b) **Briefly explain at least THREE security and control mechanisms that can be implemented to ensure maximum protection of information systems highlighting how each mechanism contributes to maintaining the confidentiality, integrity, and availability of data.** (6 Marks)

c) **Identify and discuss THREE key challenges commonly faced by enterprise knowledge management systems of your choice and explain how these challenges impact the effective capture, sharing, and utilization of knowledge within an institution.** (6 Marks)

(Total: 20 Marks)

QUESTION FOUR

Electronic commerce has become a crucial gateway for international businesses worldwide. Companies across the globe are rapidly adopting emerging technologies to stay competitive on the international stage and to deliver accurate, timely services. These successful firms recognize that their revenue comes from conducting secure transactions online, expanding their customer base, and offering goods or services more cost-effectively through the internet. However, organizations engaging in digital transactions face significant risks. They invest heavily in new technologies to store, communicate, disseminate, and retrieve information in today's technology-driven world. Despite facing ongoing threats such as viruses, hackers, and other cyberattacks, these digital firms generate substantially higher revenues than traditional businesses. This reality underscores the urgent need for conventional firms to transition into the digital environment to remain competitive.

Required:

a) While e-commerce services often succeed by leveraging databases to enhance business performance, firms also encounter several challenges in their use of databases. **Discuss at least FIVE common challenges organizations face when managing and utilizing databases.** (10 Marks)

b) **Briefly explain TWO similarities and TWO differences between traditional commerce and electronic commerce, highlighting how each operates and serves customers.** (4 Marks)

c) While e-commerce operates on a global scale and offers many advantages, it also faces several challenges on the international front. **Discuss THREE key challenges that e-commerce encounters on the global context.** (6 Marks)

(Total: 20 Marks)

QUESTION FIVE

Today, many organizations are embracing system automation to enhance efficiency, speed, and accuracy in their operations. Computers have become an essential tool, particularly in workplaces, hospitals, educational institutions, banks, and numerous other sectors. Karangwa has already equipped his operations with computers and has taken a step further by establishing an online trading platform. He is now in the process of modernizing this platform by introducing new features and extending its accessibility beyond just desktop and laptop computers to include tablets and smartphones. As part of this upgrade, the platform will incorporate messaging capabilities through Netlog, TikTok, and Instagram, while still maintaining support for traditional email communication.

Required:

a) **Discuss FIVE key management challenges that modern businesses encounter when dealing with information systems with their overall business objectives in today's dynamic and technology-driven environment.** (10 Marks)

b) As a systems project management expert, **outline and expalin two important criteria that should be considered when selecting projects highligting how they help determine the feasibility, value, and alignment of a project with organizational goals.** (4 Marks)

c) You have been hired as an expert by Karangwa's firm to help determine the business value of information systems. In this role, **explain at least THREE key ways in which information systems contribute value to the organization.** (6 Marks)

(Total: 20 Marks)

QUESTION SIX

Large companies and organizations often consist of multiple departments that require interconnected networks to share resources such as files and applications. In such environments, managing and supervising real-time resource sharing can present significant challenges. To effectively support these connections, organizations typically subscribe to internet services, utilizing either wired or wireless technologies. This connectivity plays a

crucial role in enhancing efficiency and ensuring effective resource management across the entire organization.

Required:

a) **Explain THREE factors to consider when establishing system development for a firm elaborating how each factor contributes to the success and effectiveness of the system being implemented.** (6 Marks)
b) **Describe THREE major challenges that firms commonly encounter in relation to internet usage**. (6 Marks)
c) **Identify and discuss FOUR wireless technologies that you would recommend for a firm to adopt and highliught how each technology can support the organization's communication, connectivity, and operational efficiency.** (8 Marks)

(Total: 20 Marks)

QUESTION SEVEN

Production and marketing information systems play a crucial role in helping firms manage the production and promotion of products and services for their customers. One key operational system in this area is a client order-based production system, which captures customer orders to guide manufacturing activities and prevent the accumulation of unsold inventory. Manufacturing and production information systems support the planning, development, and creation of products. A central component in this area is the inventory management system, which provides real-time information on the quantities of items required by customers. Finance and accounting information systems are responsible for tracking the organization's financial assets and the movement of funds. The finance department manages resources such as cash, shares, and other investments. To determine whether the company is achieving optimal returns, the finance team relies on data from both internal and external sources. Meanwhile, the accounting department ensures the accurate maintenance of financial records and reporting. Human resources information systems are designed to manage employee-related data, including personnel records, skill sets, job performance, and training history. These systems also support planning for employee compensation and career advancement. A good example of such a system is a performance appraisal tracking system, which monitors and records the outcomes of individual employee evaluations.

Required:

a) **Identify and briefly describe FIVE key components that make up a business intelligence system** (5 Marks)
b) **Explain FIVE different types of decision-making models commonly used by managers, highlighting how each model assists in guiding effective decision processes within organizations.** (10 Marks)
c) **List and briefly explain the FIVE key benefits that an Executive Support System (ESS) offers to an organization.** (5 Marks)

(Total: 20 Marks)

End of Question Paper

BLANK PAGE

BLANK PAGE

BLANK PAGE