∏AMIBIA U∏IVERSITY
OF SCIE∏CE A∏D TECH∏OLOGY

FACULTY OF COMPUTING AND INFORMATICS

DEPARTMENT OF INFORMATICS

QUALIFICATIONS: Bachelor of Informatics	
QUALIFICATION CODE: 07BAIF	LEVEL: 6
COURSE CODE: SAD621S	COURSE: Systems Analysis and Design
DATE: January 2025	SESSION: 2
DURATION: 2 Hours	MARKS: 80

SUPPLEMENTARY / SECOND OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINERS:	Mr Gabriel Nhinda Mr Benjamin Akinmojeye
MODERATOR(S):	Prof Samuel Akinsola

THIS EXAMINATION PAPER CONSISTS OF 4 PAGES
(INCLUDING THIS FRONT PAGE)

INSTRUCTIONS FOR STUDENTS

1. Answer ALL QUESTIONS.
2. When writing, take into account: The style should inform than impress, it should be formal, in third person, paragraphs set out according to ideas or issues, and the paragraphs flowing in a logical order.
3. Information should be brief and accurate.
4. Please ensure that your writing is legible, neat and presentable

Section A: Definition of terms   **[10 Marks]**

1) Information system   [2 Marks]
2) Logical topology   [2 Marks]
3) System development life cycle   [2 Marks]
4) Functional requirements   [2 Marks]
5) Scalability   [2 Marks]

Section B: Multiple choice questions   **[10 Marks]**

1. What is the primary goal of systems analysis?   [2 Marks]

   A) To design user interfaces

   B) To identify and solve problems within a system

   C) To write code for software applications

   D) To conduct market research

2. What is the purpose of a requirements specification document?   [2 Marks]

   A) To define the system's technical specifications

   B) To outline how the system will be tested

   C) To serve as a guide for system design and implementation

   D) To provide training materials for users

3. Which type of prototype is best for testing complex interactions?   [2 Marks]

   A) Low-fidelity prototype

   B) High-fidelity prototype

   C) Paper prototype

   D) Conceptual prototype

4. What is typically included in a change request?   [2 Marks]

    A) A summary of the project's financials

    B) A description of the proposed change and its rationale

    C) User interface mockups

    D) A list of all users affected by the change

5. Which of the following is an example of a project milestone?   [2 Marks]

    A) Completion of a task

    B) A review meeting

    C) Submission of a deliverable

    D) All of the above

Section C: Structured questions   **[34 Marks]**

1) Within organisations there are multiple levels that require different types of information. Identify four organizational levels common to many businesses and the type of information each level needs.   [8 Marks]

2) Users engage information systems through user interfaces, it is therefore important that user interfaces are usable. To aid systems analysts and user interface designer, there are 10 guidelines created. Identify the 10 guidelines and explain how would you rank the 10 guidelines for user interface design in order of importance?   [20 Marks]

3) Information systems need to be secure to avoid data breaches to achieve this, systems analysts often concern themselves with the CIA triangle. What is the CIA triangle?

[6 Marks]

Section D: Case study and knowledge application   **[26 Marks]**

1. You are employed as a systems analyst within Uit Bank. They are launching a new credit card functionality. To ensure that it operated correctly, you are tasked with creating a sequence diagram that shows the successful credit card validation process.

   Design the resulting sequence diagram that shows successful credit card validation process.   [10 Marks]

2. When a customer receives the catalogue and wants to buy something, he can make a telephone call, fax or email his order to the company. The company gets the order and sends the goods and an invoice. When the customer receives the goods with a delivery note, he sends payment and receives a receipt for payment.

   Design the context diagram and data flow diagrams (DFD)   [16 Marks]