NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

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 2024	**SESSION:** 1
DURATION: 2 Hours	**MARKS:** 80

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

THIS EXAMINATION PAPER CONSISTS OF 2 PAGES
(INCLUDING THIS FRONT PAGE)

INSTRUCTIONS FOR THE CANDIDATE

1. Answer all questions.
2. When writing, consider the following: The style should be to inform rather than impress.
3. Information should be brief and accurate.
4. Please ensure that your writing is legible, neat and presentable.

Section A: Definition of terms **[20 Marks]**

1) Attribute [2 Marks]
2) Logical topology [2 Marks]
3) Agile methods [2 Marks]
4) Systems request [2 Marks]
5) Technical feasibility [2 Marks]
6) Bottom-up technique [2 Marks]
7) Project management [2 Marks]
8) Observation [2 Marks]
9) Scalability [2 Marks]
10) Child [2 Marks]

Section B: Short answer **[24 Marks]**

1) What is the relationship between logical and physical models? [6 Marks]
2) Explain the concept of inheritance in object relationships. Provide an example of this relationship. [6 Marks]
3) In databases, validity checks are crucial to maintaining the integrity of the data they store. Answer the following questions:
   a) What is referential integrity? [4 Marks]
   b) Provide 2 examples of how referential integrity is enforced within databases. [8 Marks]

Section C: Structured questions **[20 Marks]**

1) Differentiate between Scrum and Extreme programming. [8 Marks]
2) Discuss the types of people within an organisation and the information that they might require from an information system. Also mention their responsibilities. [12 Marks]

Section C: Case study and knowledge application **[16 Marks]**

Assume that you are given the following details of a small college that allows students to register: [10 Marks]

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.

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