



**NAMIBIA UNIVERSITY  
OF SCIENCE AND TECHNOLOGY**

**FACULTY OF COMPUTING AND INFORMATICS**

**DEPARTMENT OF INFORMATICS**

<b>QUALIFICATIONS:</b> Bachelor of Informatics	
<b>QUALIFICATION CODE:</b> 07BAIF	<b>LEVEL:</b> 6
<b>COURSE CODE:</b> SAD621S	<b>COURSE:</b> Systems Analysis and Design
<b>DATE:</b> November 2023	<b>SESSION:</b> 1
<b>DURATION:</b> 2 Hours	<b>MARKS:</b> 80

<b>FIRST OPPORTUNITY EXAMINATION QUESTION PAPER</b>	
<b>EXAMINERS:</b>	Mr Gabriel Nhinda
<b>MODERATOR(S):</b>	Prof Samuel Akinsola

**THIS EXAMINATION PAPER CONSISTS OF 3 PAGES  
(INCLUDING THIS FRONT PAGE)**

**INSTRUCTIONS FOR THE CANDIDATE**

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) Scope Creep [2 Marks]
- 2) PERT Chart [2 Marks]
- 3) User Experience [2 Marks]
- 4) Business process [2 Marks]
- 5) Intangible benefits [2 Marks]

**Section B: Short answer**

**[20 Marks]**

- 1) Maintenance of information systems forms part of the Total Cost of Ownership (TCO). Which leads to maintenance costs, determining the overall economic life of a system. Identify 4 types of maintenance tasks and provide a brief explanation of each. [8 Marks]
  
- 2) During the systems design phase, the logical model of the system is presented.
  - a) Identify 4 types of keys that can be presented within a database. [4 Marks]
  - b) Explain each of the 4 types of keys that can be presented within a database. [4 Marks]
  - c) Provide an example for each of the 4 types of keys that can be presented within a database. [4 Marks]

**Section C: Structured questions**

**[20 Marks]**

- 1) Within Information systems projects requirements elicitation is one of the major tasks that are carried out. One technique used to elicit requirements is interviews.
  - a) Name any other requirements elicitation techniques within information systems projects. [1 Mark]
  - b) Briefly explain the 5 steps involved with this technique. [10 Marks]
- 1) An interface design prototype is used to show users and programmers how the system will perform.
  - a) State the 3 most common approaches to interface design prototyping. [3 Marks]
  - b) Explain each of the 3 most common approaches to interface design prototyping. [3 Marks]
  - c) Provide an example for each of the most common approaches to interface design prototyping. [3 Marks]

**Section C: Case study and knowledge application****[30 Marks]**

You have been hired as the lead systems analyst for Togoba Managers Pty Ltd. They have a systems project planned and have identified the tasks indicated in Table 1. They anticipate that the project will start on 10 January 2024. Answer the following questions.

*Table 1 List of Tasks*

Task ID	Task Description	Predecessor Task(s)	Time (days)
1	Establish project	-	2
2	Establish customer requirements	1	3
3	Produce software specification documents	2	4
4	Write test plans	3	4
5	System coding	3	5
6	Quality assurance testing	5	3
7	User acceptance testing	4,6	4
8	Writing user documentation	7	3

- 1) Draw the resulting Gantt chart. [10 Marks]
- 2) Draw the PERT Chart for the above project. [10 Marks]
- 3) What is the critical path for the project? [7 Marks]
- 4) What is the expected end date for the project? [3 Marks]