



## **MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY**

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### **UNIVERSITY EXAMINATIONS 2023/2024**

**FIRST YEAR, SECOND SEMESTER EXAMINATION FOR DIPLOMA IN INFORMATION TECHNOLOGY AND CERTIFICATE IN INFORMATION TECHNOLOGY**

#### **CIT 1213/ CIT 2213: SYSTEMS ANALYSIS AND DESIGN**

**DATE: DECEMBER 2024**

**TIME: 1½ HOURS**

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**INSTRUCTIONS: Answer Question ONE and any other TWO questions.**

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#### **QUESTION ONE (30 MARKS)**

- a) Differentiate the following as used in system analysis and design
  - i. System analysis and system design (2 Marks)
  - ii. System and project (2 Marks)
  - iii. Functional and non-functional requirements (2 Marks)
  - iv. Technical feasibility and legal feasibility. (2 Marks)
  - v. Direct changeover and parallel changeover (2 Marks)
- b) Describe two roles of a system analyst during SDLC. (4 Marks)
- c) Outline three types of DFDs. (6 Marks)
- d) Outline three advantages of prototyping. (3 Marks)
- e) Outline two characteristics of a good system. (4 Marks)
- f) Describe the importance of documentation in system analysis and design. (3 Marks)



## **QUESTION TWO (15 MARKS)**

- a) Explain two methods of fact finding. (4 Marks)
- b) Describe what happens during the design phase of SDI-C. (6 Marks)
- c) What activities are involved in the deployment phase of the SDLC? (5 Marks)

## **QUESTION THREE (15 MARKS)**

- a) Structured walkthrough is a planned review of system by people not involved in its development effort. describe three reasons why it's important carry out a structured walkthrough during system development. (6 Marks)
- b) Describe two activities carried out during the system implementation phase of the System Development Life Cycle. (4 Marks)
- c) Explain two types of information systems. (5 Marks)

## **QUESTION FOUR (15 MARKS)**

- a) Discuss three differences between waterfall model and the spiral model. (5 Marks)
- b) A fast food joint has expanded the number of outlets around a city. At the moment the outlets use conventional cash tills. The fast food joint would like to implement a Point-Of-Sale (POS) system in all its outlets with linkages to a centralized computer. Assume you are the systems analyst and you have been asked to assist in the conversion process from the existing system to the new one.
  - i. Describe the change-over options that are available and recommend the most suitable method for the new system. [10 Marks]

