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**KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**UNIVERSITY EXAMINATION, 2022/2023 ACADEMIC YEAR**  
**FOR THE CERTIFICATE IN INFORMATION TECHNOLOGY**  
**CIT 1005 - SYSTEMS ANALYSIS AND DESIGN**

Date: 2<sup>ND</sup> AUGUST 2022

Time: 2:30PM – 4:30PM

**INSTRUCTIONS TO CANDIDATES**

**ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS**

**QUESTION ONE (30 MARKS)**

- a) Distinguish between the following as used in system analysis and design;
- i) Probabilistic and deterministic systems (2 Marks)
  - ii) Formal and informal system (2 Marks)
  - iii) Physical and abstract system (2 Marks)
  - iv) Open and closed systems. (2 Marks)
  - v) Structured and rapid application development
- b) Explain **Two** reasons for initiating an information systems project. (4 Marks)
- c) Describe the concept of a system and explain **Four** of its characteristics. (8 Marks)
- d) Define feasibility study and Explain **THREE** types of feasibility study that should be carried out before system development. (8 Marks)
- e) Describe **Two** activities performed during Systems Analysis. (2 Marks)

**QUESTION TWO (20 MARKS)**

- a) Explain the Systems life cycle, highlighting major activities in every stage. (10 Marks)
- b) Analyze the importance of system maintenance to an organization. (4 Marks)
- c) Describe **Three** major components of a system. (6 Marks)

**QUESTION THREE (20 MARKS)**

- a) A variety of tests are usually performed on software systems. Explain **FOUR** such tests. (8 Marks)
- b) Describe **Three** tools used by the analyst during system analysis. (6 Marks)
- c) State **FOUR** attributes of a good system analyst. (4 Marks)

**QUESTION FOUR (20 MARKS)**

- a) Distinguish between “Systems Approach” and “Systems Analysis”. (4 Marks)
- b) Explain any **Five** roles of a system analyst in system development. (10 Marks)
- c) Describe **Three** approaches to maintaining software systems. (6 Marks)

**QUESTION FIVE (20 MARKS)**

- a) Explain any **five** advantages of waterfall model in system development. (10 Marks)
- b) Define the term data and explain **FOUR** tools used in data collection. (10 Marks)