KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATION, 2023/2024 ACADEMIC YEAR
FOR THE CERTIFICATE IN INFORMATION TECHNOLOGY
CIT 1005 – INTRODUCTION TO SYSTEM ANALYSIS AND DESIGN

Date: 19TH APRIL 2023
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 terms as used in system analysis and design.
   i. Logical and Physical design. (2 Marks)
   ii. Milestones and Deliverables. (2 Marks)
   iii. Systems validation and System Verification. (2 Marks)
   iv. Probabilistic and deterministic systems (2 Marks)

b) Explain six roles played by the system analyst during information system development
. (6 Marks)

c) Explain four reasons why information system projects may fail. (4 Marks)

d) Explain the meaning of the following terms. (4 Marks)
   i. Database architecture.
   ii. Database management system.

e) As a system analyst on the development team, you chair a meeting to define the aims of system improvement with the project owners and users. Describe any 3 reasons why system improvement is done. (6 Marks)

QUESTION TWO (20 MARKS)

a) Describe the system development life cycle (10 Marks)
b) Discuss the main role of a system analyst in a software project management (3 Marks)
c) Using your own words define "effective system" (2 Marks)
d) Discuss main characteristics of user interface (5 Marks)

QUESTION THREE (20 MARKS)

a) State and explain the three advantages and two disadvantages of using questionnaires as a technique (5 Marks)
b) Explain any three desirable properties of good system design (6 Marks)
c) Describe software usability (2 Marks)
d) Identify the main factors contributing to software usability (4 Marks)
e) Explain the advantages of flow chart (3 Marks)

QUESTION FOUR: (20 MARKS)

a) Define the following terms as used in System Analysis and Design.
  - i. System
  - ii. Sub-System
  - iii. System Design
  - iv. Information System
  - v. Feasibility. (10 Marks)

b) Discuss different types of system in System Analysis and Design. (10 Marks)

QUESTION FIVE: (20 MARKS)

a) With the aid of a sketch in each case, outline three components of system flow chart. (5 Marks)

b) Outline the strengths of object oriented methodology as used in system development (5 Marks)

c) Differentiate between black box and white box testing methods. (5 Marks)

d) Paul intends to use case diagram to analyze a proposed information system. Outline five advantages he would realize while using the tools. (5 Marks)