MURANG'A UNIVERSITY OF TECHNOLOGY

SCHOOL OF COMPUTING AND INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

UNIVERSITY ORDINARY EXAMINATION

2020/2021 ACADEMIC YEAR

SECOND YEAR **FIRST** SEMESTER EXAMINATION FOR DIPLOMA IN INFORMATION TECHNOLOGY

SIT 055– SYSTEM ANALYSIS AND DESIGN

DURATION: 2 HOURS

Instructions to candidates:

1. Answer question One and Any Other Two questions.
2. Mobile phones are not allowed in the examination room.
3. You are not allowed to write on this examination question paper.

SECTION A: ANSWER ALL QUESTIONS IN THIS SECTION

QUESTION ONE (30 MARKS)

a) Define the following terms (3marks)

(i) Systems
(ii) System analysis
(iii) System design

b) Why is system analysis and design so important for any software developer? (4marks)

c) Who is the system analyst? And what are his roles in software development (4marks)

d) Highlight the salient qualities of a system analyst (4marks)

e) In the past, IT managers divided systems into categories based on the user group the system served. List four of these systems (4marks)

f) What is the system maintenance? And what are the main types of system maintenance can you offer as a system developer (6marks)

g) Fact finding in system analysis and design involves collection of information about the existing system on which to base analysis in order to determine whether users' current needs are being met. List any five techniques that can be used to accomplish this (5marks)

SECTION B – ANSWER ANY TWO QUESTIONS IN THIS SECTION

QUESTION TWO (20 MARKS)

a) There are a number of tools that can be used to develop any computerized system. They translate to the methods that can be used to develop a computerized system. Explain any four of these tools. (8marks)

b) As a system analyst, discuss in detail the various types of users at different levels of an ideal organization. (3marks)

c) List the five key components of information system. (4marks)

QUESTION THREE (20 MARKS)

a) Feasibility study is a very important study in system analysis and design since it defines the problem and decide whether or not a new system to replace the existing one is viable or feasible. Explain any four main areas that feasibility study covers. (8marks)

b) Explain the two main types of systems testing during the system development (4marks)

c) Explain how we can integrate new technologies into traditional systems (8marks)

QUESTION FOUR (20 MARKS)

a) Software development life cycle is also known as traditional system development method or function driven method or process driven method. The method requires the analyst to follow a sequence of phases during the development and implementation of an information system. This involves people and is described as information system development project.

(i) List and explain the system development cycle phases or stages, giving deliverable of each phase. (7marks)

(ii) Why is user's involvement so necessary in this software development methodology? (3marks)

b) Software documentation is very important for a customer as it gives a description of software or system after its development

(i) Highlight any four main contents of the system documentation (4marks)

(ii) What are the main reasons why software engineers dislike producing documentation? (2marks)

c) System change- over involves changing or switching from existing system to the new developed system. List any four ways of achieving this. (4marks)