MURANG'A UNIVERSITY OF TECHNOLOGY

SCHOOL OF COMPUTING AND INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

UNIVERSITY ORDINARY EXAMINATION

2018/2019 ACADEMIC YEAR

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

SIT 055– SYSTEM ANALYSIS AND DESIGN

DURATION: 2 HOURS

DATE: 23/4/2019

TIME: 9-11 A.M.

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. (3 marks)

    i. System

    ii. Information system

    iii. Stakeholder.

b) Distinguish between the following

    i. Logical design and physical design (2 marks)

    ii. White box testing and Black box testing. (2 marks)

    iii. Probabilistic system and Deterministic system. (2 marks)

c) System Analysis is a critical phase in the system development life cycle. Justify. (6 marks)

d) State 3 key players in system development process. (3 marks)

e) Explain 3 ways in requirements can be gathered from customers. (6 marks)

f) Discuss 3 importance of system documentation. (6 marks)

SECTION B – ANSWER ANY TWO QUESTIONS IN THIS SECTION

QUESTION TWO   (20 MARKS)

a) The food order system in Nokras Hotel is as Follows:

The system receives the order; forwards it to the kitchen, store it and also delivers a bill to the customer

<u>Required</u>

Prepare a Data Flow Diagram (DFD) according to the above narrative. (6 marks)

b) Discuss four types of feasibility studies. (8 marks)

c) Briefly describe the waterfall model software lifecycle with help of a schematic diagram.

(6 marks)

QUESTION THREE (20 MARKS)

a) Explain the following types of system maintenance. (4 marks)

    i. Corrective maintenance

    ii. Perfection maintenance

    iii. Adaptive maintenance

iv.   Preventive maintenance

b) A company has decided to purchase 'off the shelf' (OTS) software to handle the financial aspects of its business. Describe at least 5 general criteria that should be used to decide which OTS software applications are suitable for the company.   (10 marks)

c) It is important that the system users be trained to familiarize themselves with the hardware and the system before the actual change over, Explain three importance of this user training.

(6 marks)

QUESTION FOUR (20 MARKS)

a) Discuss any four elements of a system.   (8 marks)

b) Explain any four types of system testing.   (8 marks)

c) Distinguish between the following.

i.   Parallel Changeover and phased changeover.   (2 marks)

ii.   Summative evaluation and formative evolution.   (2 marks)