



MURANG'A UNIVERSITY COLLEGE
(A constituent College of Jomo Kenyatta University of Agriculture and Technology)
UNIVERSITY EXAMINATIONS 2014/2015
YEAR ONE SEMESTER TWO EXAMINATION FOR THE DIPLOMA IN
INFORMATION TECHNOLOGY
SCI 1107: SYSTEM ANALYSIS AND DESIGN

COURSE: DIT

TIME: 2 HOURS

DAY/TIME: Wednesday 2:00pm-4:00pm

DATE: 19TH August 2015

Instructions: Answer Question One and Any Other Two

Question 1.

- a. Define the following terms
 - i. System
 - ii. System design
 - iii. Boundary
 - iv. System analysis (4 Marks)
- b. State and explain any three types of testing as used in SAD (6 Marks)
- c. Explain any **THREE** constraints in analysis and design of systems (6 Marks)
- d. Describe **FOUR** roles of the system analyst in system development (4 Marks)
- e. Candidates are accepted for employment if qualifications and references are satisfactory and they pass the interviews. Where a candidate's references or the interview are both unsatisfactory, a job for probationary period is offered. In all other circumstances the candidates' application is rejected. Construct a decision table for this scenario (10 marks)

Question 2.

- a. Define the term Data Flow Diagrams (2 Marks)
- b. With the aid of a diagram briefly explain the **FOUR** components of Data Flow Diagrams (8 Marks)
- c. Describe the two major components of Systems development (4 Marks)
- d. Highlight the possible causes of project failures (6 Marks)

Question 3.

- a) Highlight the three stages of system development (3 marks)
- b) Discuss the activities involved in the system planning process of SDLC (8 Marks)
- c) An important decision to be taking with regard to the regard to the implementation of a system is the method of changeover to be adopted. Describe THREE methods of change over available, and highlight the advantages of each (6 Marks)
- d) Define the importance of system scheduling (3 Marks)

Question 4.

- a. Distinguish between logical and physical design. (2 marks)
- b. Highlight the two program testing techniques (2 Marks)
- c. Discuss the elements of a system (5 Marks)
- d. Describe how the prototyping software development methodology works (3 marks)
- e. Phillip, a system analyst with a new company has a task of reviewing the information system.
 - i. Identify the most appropriate type of documentation that he would require to efficiently carry out the task justifying your answer (2 Marks)
 - ii. Outline six possible contents of the type of documentation identified in (i)(6 Marks)