



MURANG'A UNIVERSITY COLLEGE

(A constituent College of Jomo Kenyatta University of Agriculture and Technology)

UNIVERSITY EXAMINATIONS 2015/2016

**YEAR ONE SEMESTER EXAMINATION FOR THE DIPLOMA IN INFORMATION
TECHNOLOGY**

SCI 1107: SYSTEM ANALYSIS AND DESIGN

COURSE: DIT

TIME: 2HRS

DAY/TIME: Monday 8:30-10:30 Am

DATE: 25TH April 2015

INSTRUCTIONS: Answer question one and any other two questions

Question 1.

- a. Define the following terms
- i. Information System
 - ii. Smart Cards
 - iii. Interface
 - iv. System analysis (4 Marks)
- b. Propose the type of information system you would recommend for the following applications:
- (i) Maintenance of general ledger (1mark)
 - (ii) Formulation of competitive market strategies (1 mark)
 - (iii) Financial sensitivity or risk analysis. (1mark)
 - (iv) Ticket reservations. (1mark)
- 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. Discuss the activities involved in the system planning process of SDLC (8 Marks)

Question 2.

- a. Define the term Data Flow Diagrams (2 Marks)
- b.
- c. Highlight the possible causes of project failures (6 Marks)
- d. Discuss any four types of feasibility assessment that you need to perform to enable you recommend the undertaking of- a given project. (8 marks)

Question 3.

- a) Highlight the three stages of system development (3 marks)
- b) The basic objective of user interface is to minimize the human error during data entry.
 - i) Explain the error control measures incorporated into a user interface. (4 marks)
 - ii) What are the implications of the error control measures in (i) above? (4 marks)
- c) Discuss the activities involved in the system planning process of SDLC (8 Marks)
- d) 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)
- e) Define the importance of system scheduling (3 Marks)

Question 4.

- a) Tactical management level may require the use of Decision Support Systems (DSS) for semi-structured decisions and data modelling.

Required:

- (i) Describe **four** functional characteristics of Decision Support Systems (DSS). (8 marks)
- (ii) Name **four** types of accounting information systems which DSS may address. (4 marks)
- (iii) Explain the term "prototype" and describe the main steps involved in its development. (8 marks)