



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS

**UNIVERSITY EXAMINATION FOR THE DEGREE IN BACHELOR OF EDUCATION
ARTS**

2ND YEAR 1ST SEMESTER 2016/2017 ACADEMIC YEAR

COURSE CODE: SCS 203

COURSE TITLE: INFORMATION SYSTEMS ANALYSIS AND DESIGN

EXAM VENUE: STREAM: (EDUCATION ARTS)

DATE: EXAM SESSION: JAN-APRIL 2017

TIME: 2.00 HOURS

INSTRUCTIONS:

- 1. Answer Question 1 (Compulsory) and ANY other two questions**
- 2. Candidates are advised not to write on the question paper**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**

QUESTION ONE [30 Marks]

- a) The Kenya High School has just acquired an results grading systems [10 Marks]
- (a) Draw a context diagram for the system.
 - (b) Draw a level 1 data flow diagram for the system.
- b) Design a Screen output form for your term paper project (10 Marks)
- c) User involvement is important for the success of computer projects. The user can contribute to several stages of the project cycle. For THREE of these stages, describe how the user can contribute and how the computer project will benefit from this involvement. (10 Marks)

QUESTION TWO [20 MARKS]

- a) The information technology department organizes an end of semester party. The message is given to the members of staff by the secretary indicating the date, time, venue and amount to be contributed by members. The members send their contributions to the secretary for the party. Information to the members may be by E-Mail, telephone and letter if they are on leave. (10 marks)

Required:

- i. Draw a Logical DFD
 - ii. Draw a physical DFD
- b) Suppose you have to redesign an interface used by clerical staff for data entry to a government database. The current interface is line-based. Your customer wants to redesign this interface to improve productivity and lower data entry error rates which are currently quite high. Describe the key interface features and functions you'd consider in putting together a design. (10 marks)

QUESTION THREE [20 Marks]

a) Systems development projects flow from the information systems plan. list five components that make up the information's systems plan. [10 Marks]

b) The Langata High School Mathematics department has acquired a systems .The system is required which allows a user to input an unordered list of integer numbers into a computer. The system will store these numbers in the main store of the computer where they are to be sorted by the system into ascending numeric order and re-stored. Finally the system is to print out the list for the user.

(i) Draw a context diagram for this problem. (5 marks)

(ii) Draw a level 1 data flow diagram for this problem. (5 marks)

QUESTION FOUR [20 Marks]

a) Explain any three importance of prototyping in systems development. (10 marks)

b) Discuss any five factors affecting the cost of Maintenance (10 Marks)

QUESTION FIVE [20 Marks]

a) Using a diagram ,describe the Building the Baseline Project Plan for your term paper project [10 Marks]

b) A fast-food organization has expanded the number of out lets around a city. At the moment the outlets use conventional cash tills. The organization would like to implement a Point-Of-Sale (POS) system in all its outlets with linkages to a centralized computer.

Assume you are the organization's systems analyst and you have been asked to assist in the conversation process from the existing system to the new one :Evaluate the change-over options that are available and recommend the most suitable method for the new system. (10 marks)