



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

(A Centre of Excellence)

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

**DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY
(DICT/JAN 12/S-FT DIT/JAN 2012/S-FT)**

EIT 2106/ECT 2108: SYSTEMS ANALYSIS & DESIGN

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: OCTOBER 2012

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

This paper consist of **FIVE** questions

Answer question **ONE** and any other **TWO** questions
Maximum marks for each part of a question are as shown
This paper consists of **THREE** printed pages

SECTION A (COMPULSORY)

Question One (20 marks)

- a) During the design and development of a computerized information processing system, various types of documentation are produced. Explain **FOUR** functions performed by some of these documentations. **(8 marks)**
- b) It is for systems analysis involved in the introduction of new or upgraded computer systems to encounter resentment and opposition from existing employees. This may take many forms from outright opposition to active hostility toward the new system during fact finding interviews.
- i) Outline **FOUR** reasons for employees to reach in this manner. **(4 marks)**
ii) Outline **FOUR** measures that can be taken by the systems analyst to alleviate this resistance. **(4 marks)**
- c) ABC Company Ltd will need kshs. 250,000 at the end of 3 years for restructuring. Calculate the present investment value the company needs to invest at a annual compound interest rate of 10%. **(4 marks)**

SECTION B (Answer Any Two Questions)

Question Two (20 marks)

A fast-food organization has expanded the number of outlets around a city. At the moment of outlets use convectional cash tills. The organization would like to implement a point-of-sale linkages to a centralized computer.

Assume you are the organization's systems analyst and you have been asked to assist in the conversion process from the existing system to the new one:

- a) Evaluate the change-over options that are available and recommend the most suitable method for the new system. **(12 marks)**
b) Construct a sequential checklist of activities to be carried out during the implementation process. **(8 marks)**

Question Three (20 marks)

Assuming that you are a senior analyst working in an IT department of a large organization that currently uses the traditional SDLC as the standard for developing new systems. You have been asked by your manager to examine a number of structured systems methodologies with a view to recommending the most appropriate one to be adopted by the company.

- a) Explain **FIVE** features of structured approach to systems analysis and design. **(10 marks)**
b) Set up a plan for carrying out this request. **(10 marks)**

Question Four (20 marks)

- a) Outline **SIX** areas where systems are most vulnerable. **(6 marks)**
b) Outline **FOUR** reasons for computer systems being more vulnerable than manual systems to destruction by error, misuse and fraud. **(8 marks)**
c) State **TWO** characteristics for each of the following classes of forms as used in systems design

- i) Action
- ii) Memory
- iii) Report

(6 marks)

Question Five (20 marks)

System analysts require **THREE** views of any system that they are developing. These cover the way data flows, the entities involved and the timing of the events and their effects that occur in the processing involved.

- a) Outline each of the **THREE** major tools that the system analyst will use. **(9 marks)**
- b) Once developed, explain the joint values or relationships that these tools will have to the systems analyst. **(8 marks)**
- c) Explain **TWO** reasons for putting the effort required at the analysis stage of a computer project. **(3 marks)**