



TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:
BACHELOR OF TECHNOLOGY IN INFORMATION TECHNOLOGY
(BTIT M132)

EIT 4206: SYSTEMS ANALYSIS & DESIGN

END OF SEMESTER EXAMINATION

SERIES: AUGUST 2013

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

This paper consists of **FIVE** questions. Attempt 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

Question One (Compulsory)

a) Define the following terms as used in Systems Analysis and Design:

- (i) System
- (ii) Systems theory
- (iii) Systems analysis
- (iv) Systems design

(8 marks)

b) State and explain any **SIX** principles of systems development

(6 marks)

- c) State and explain any **FOUR** reasons for user resistance during systems development. **(4 marks)**
- d) A system life cycle has **FOUR** stages as shown below.
Birth (1)

Required:

Briefly describe each of the above four stages for an information system **(12 marks)**

Question Two

- a) Briefly explain the term “Systems Development Lifecycle (SDLC)” and state the **SIX** stages of SDLC **(8 marks)**
- b) Briefly describe any **FOUR** alternative lifecycles for developing systems **(12 marks)**

Question Three

- a) State any **THREE** uses of dataflow diagrams **(3 marks)**
- b) Briefly describe the main components of a dataflow diagram and give example for each. **(8 marks)**
- c) An IS manager has drawn up a detailed Dataflow diagram given below:

Dispatch goods

Required:

- (i) Identify any **THREE** errors in the diagram **(3 marks)**
- (ii) State the possible name of the process labeled 4 **(4 marks)**
- (iii) State the possible names of the dataflows labeled as A, B, C, D **(4 marks)**

Question Four

- a) Define the term “feasibility study” **(2 marks)**
- b) State any **THREE** objectives of feasibility study **(6 marks)**
- c) Briefly explain the different types of feasibility study. **(12 marks)**

Question Five

A Systems Analyst has noted the following in an interview with a user.

Orders are received from customers; orders may be received by post or emails from appointed agents. Each agent is responsible for many domestic customer accounts. Each individual order is received from only one customer. Customers place many orders in the year. Orders are usually for multiple products. Orders may be modified until the invoice is raised. Order modifications are usually due to change in order quantities. At the end of the week an invoice is raised. This lists the orders placed in that week and produces a detailed price breakdown and invoice total fall all the orders placed in the week. The invoice is sent to the customer, customer payments are recorded in a spreadsheet, some customers send cheques that cover many invoices. On some occasions a customer pays part of the invoice amount because there is dispute over some of the products billed over the invoice. Orders are deleted after seven years or if customers goes into liquidation.

Draw:

- (i) Logical Data Structure (LDS)
- (ii) DFD **(20 marks)**