



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE

**ADVANCE CERTIFICATE IN INFORMATION
TECHNOLOGY (ACIT)**

FINAL EXAMINATIONS

APRIL/MAY 2010 SERIES

SYSTEMS ANALYSIS AND DESIGN

TIME: 2 hours

INSTRUCTIONS TO CANDIDATES

1. This paper consists of **TWO** Sections: **A** and **B**.
2. **Section A** has a total of 30 Marks. Answer **ALL** Questions from this section.
3. **Section B** has **FOUR** Questions of 20 Marks each.
Answer any **TWO** Questions from this section.

SECTION A (30 MARKS) - COMPULSORY

Question ONE

- (a). Define the term system. **(2 Marks)**
- (b). State **FIVE** elements of a system. **(5 Marks)**
- (c). Outline **FOUR** roles of a systems analyst. **(4 Marks)**
- (d). State **FOUR** qualities of a systems analyst. **(4 Marks)**
- (e). State **THREE** functions of information systems. **(4 Marks)**
- (f). State **TWO** characteristics of each of the following levels of organizational information:
 - (i). Strategic Planning Information.
 - (ii). Tactical Control Information.
 - (iii). Operational Control Information**(6 Marks)**
- (g). State **SIX** principles of systems development. **(6 Marks)**

Section B (40 MARKS)

ANSWER ANY TWO QUESTIONS: ALL QUESTIONS CARRY EQUAL MARKS:

Question TWO

- (a). Define systems development Life Cycles (SDLC). **(2 Marks)**
- (b). Briefly explain any **FOUR** factors of Systems Development. (SD). **(8 Marks)**
- (c). Identify the deliverables of each of the following stages of SDLC.
 - (i). Problem identification and Definition.
 - (ii). Feasibility study
 - (iii). Systems analysis
 - (iv). Systems design
- (d). Outline any **THREE** types of feasibility study. **(3 Marks)**
- (e). State any **THREE** methods of fact-finding used in systems investigation. **(3 Marks)**

Question THREE

- (a). Define the term “Information Systems”. **(3 Marks)**
- (b). Briefly explain any **TWO** types of information systems. **(6 Marks)**

- (c). State **FOUR** components of computer-based information systems. **(4 Marks)**
- (d). Explain the term “Management Information Systems”. **(3 Marks)**
- (e). Briefly explain any **TWO** types of information (reports) produced by MIS. **(4 Marks)**

Question FOUR

- (a). System investigation consists of **THREE** main tasks:

- (i). Feasibility study
- (ii). Fact finding and
- (iii). Fact recording

Explain the objectives of each of these tasks.

(6 Marks)

- (b). Explain any **THREE** types of Feasibility study. **(6 Marks)**
- (c). State any **FOUR** reasons for user resistance during system development. **(4 Marks)**
- (d). State any **FOUR** fact recording techniques used in system development. **(4 Marks)**

Question FIVE

- (a). Briefly explain the **THREE** functions of information systems. **(6 Marks)**
- (b). Outline any **FOUR** guidelines for designing questionnaires. **(4 Marks)**
- (c). Briefly explain any **TWO** fact finding techniques highlighting their most suitable area of application. **(6 Marks)**
- (d). State ONE advantage and ONE disadvantage for each of the techniques in (c) above. **(4 Marks)**