



# THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of Jkuat)

*Faculty of Engineering and Technology*

**DEPARTMENT OF COMPUTER SCIENCE & INFORMATION  
TECHNOLOGY**

**DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY –  
DICT10M (YR 2 SEM 1)**

**EIT 2205: SYSTEMS ANALYSIS AND DESIGN**

**END OF SEMESTER EXAMINATIONS**

**SERIES: AUGUST/SEPTEMBER 2011**

**TIME: 2 HOURS**

**Instructions to Candidates:**

You should have the following for this examination

- *Answer booklet*

This paper consists of **FIVE** questions

Section **A** is **COMPULSORY**. Section **B** has **FOUR** questions carrying equal marks. Answer any **TWO** questions in this section

This paper consists of **THREE** printed pages

## **SECTION A (COMPULSORY) (30 MARKS)**

### **Question 1**

- a) Define a system (2 marks)
- b) Explain any **THREE** components of a system (6 marks)
- c) State the deliverables of each of the following SDLC stages (4 marks)
  - i) Problem definition
  - ii) Feasibility study
  - iii) System design
  - iv) System implementation
- d) Explain the importance of feasibility study (4 marks)
- e) Briefly explain any **THREE** types of information systems (6 marks)
- f) State **THREE** levels of organizational information for management (3 marks)
- g) A warehouse operates a mail order business. Customers send orders, stocks and credit are checked and the goods dispatched to the customer. Construct a context diagram for the above. (5 marks)

## **SECTION B (40 MARKS)**

### **Question 2**

- a) Briefly explain **TWO** roles of a system analyst (4 marks)
- b) Explain the **THREE** functions of information systems (6 marks)
- c) Explain any **THREE** reasons for user-resistance during system development (6 marks)
- d) Differentiate between logical and physical data flow diagrams (4 marks)

### **Question 3**

- a) Explain system development life cycle (3 marks)
- b) Explain the following feasibilities (9 marks)
  - (i) Economic feasibility
  - (ii) Technical feasibility
  - (iii) Operational feasibility
- c) Using suitable sketches, explain the components of data flow diagrams (8 marks)

#### Question 4

Mombasa Polytechnic University College would like to develop an online Examination System (ES). The Council and Management staff has been advised to hire a system analyst to advise them on the way forward. Assuming the role of the analyst, can you advise MPUC precisely on the steps that will be taken to come up with the system? (20 marks)

#### Question 5

- a) Explain the difference in meaning between the following terms (4 marks)
  - (i) Formal and informal information systems
  - (ii) Logical and physical dataflow diagrams
- b) Briefly explain any **TWO** fact-finding techniques (6 marks)
- c) Differentiate between exceptional and summary reports for management reporting (4 marks)
- d) Discuss the importance of system analysis and design in the development of a system (6 marks)