THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of Jkuat)

Faculty of Engineering and Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

DIPLOMA IN INFORMATION TECHNOLOGY (DIT 10M)

ECS 2202 : SYSTEM ANALYSIS & 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 consist of **FIVE** questions in **TWO** sections **A** & **B**
Answer question **ONE (COMPULSORY)** and any other **TWO** questions
Maximum marks for each part of a question is as shown
This paper consists of **THREE** printed pages
SECTION A (*Compulsory – 30 MARKS***)**

Question ONE

a) Define the term "system development lifecycle" (2 marks)

b) State the principles of system development life cycle (6 marks)

c) Explain the stages of the system development life cycle (14 marks)

d) Explain the components of data flow diagram (8 marks)

SECTION B (Attempt any **TWO** questions from this section)

Question TWO *(20 Marks)*

a) Explain the term "feasibility study" (2 marks)

b) Explain the objectives of feasibility study (8 marks)

c) Explain the contents of a feasibility study report (10 marks)

Question THREE *(20 Marks)*

a) Explain the methods of fact finding (10 marks)

b) State **TWO** advantages and two disadvantages of each of the methods (10 marks)

Question FOUR *(20 Marks)*

a) Draw a DFD for the following description (16marks)

When an invoice is received from a supplier, it is checked against a file of authorized purchases. If the invoice does not match an authorized purchase then it is returned to the supplier with a querrying letter. If the invoice matches an authorized purchase but is for an incorrect amount then it is returned to the supplier with a standard form. If the invoice reconciles a payment authorization is made out. A cheque is then sent to the supplier and the invoice and the authorization filed.

b) Give four advantages of using DFD's (4marks)

Question FIVE *(20 Marks)*

a) A company has invested in system at a cost of kshs 400,000. The details of the operational costs and benefits for a five year period is shown below.

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Cost	400,000	20,000	21,000	23,000	32,000	34,000
Benefits	0	100,000	150,000	200,000	230,000	250,000

Assuming a discounting rate of 12% per year determine

   (i) NPV
   (ii) Payback period

      (iii)   Project viability   (10 marks)

b) Explain the stages of the structured system analysis and design methodology (SSADM) (10 marks)