



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

Faculty of Engineering and Technology

DEPARTMENT OF ELECTRICAL & ELECTRONIC ENGINEERING

DIPLOMA IN TECHNOLOGY

Instrumentation and Control Engineering

Electronic Engineering

Programming and Software Engineering I

EEE 2257

PROGRAMING & SOFTWARE ENGINEERING I

SEMESTER 3 EXAMINATIONS

SERIES: FEBRUARY 2011 SERIES

TIME: 2 HOURS

Instructions to Candidates:

1. You are required to have the following for this examination;
 - Answer booklet
 - Computer
2. This paper consists of **TWO** sections. **Section A (Theory Questions)** and **Section B (Practical Questions)**.
3. Answer **ALL** questions in **Section A** and any **TWO** questions in **Section B**.

SECTION A: (THEORY)

Question ONE

- a) i) Describe the stages of system development life cycle (SDLC) (12marks)
ii) State any THREE qualities required of system analyst. (3 marks)

Question TWO

- a) i) Explain any THREE fact finding methods used during system investigation. (6 marks)
ii) Describe any THREE methods of system change over. (6 marks)
iii) State any THREE purposes of system review. (3 marks)

SECTION B: (PRACTICALS)

Question ONE

Design the following relational database using visual basic visdata manager and populate the file with at least five valid records. The database should be saved as “Empobase” and the file as “Empfile”. (20marks)

Field	Description	Type	Size
EMPNo	Employee Number	Text	15
IMPNM	Employee Name	Text	30
DOEMP	Data of Employment	Date/Time	-
DOB	Date of Birth	Date/Time	-
EMPAge	Employee Age	Integer	-
NOK	Next of Kin	Text	20
EMPSAL	Employee salary	Currency	-
MOBNO.	Mobile Number	Integer	-
EMPT	Employee Title	Text	30
EMPDEP	Employee Department	Text	30

Question TWO

For the database developed in Q1, develop a visual basic program to perform the following operations:

- i) Add new data item to the database
ii) Edit data previously entered into the database
iii) Cancel new data entry when cancel button is pressed.
iv) Save new data entry into the database.
v) Delete an existing record. (20marks)

Question THREE

- a) Using a form level variable, develop a visual basic program to determine the quality of a product in the following circumstances:
- A product with wrong dimensions is rejected.
 - A product with correct dimensions but fails either mechanical test or electrical test but not both is sent back to the workshop for repair.
 - Reject the product for all other conditions.
- b) Develop a VB code that will multiply integer numbers and displays the product on a label if the result is between 30 and 40. Otherwise it displays “outside the limit stated” statement.