



TECHNICAL UNIVERSITY OF MOMBASA
Faculty of Engineering & Technology

DEPARTMENT OF MECHANICAL & AUTOMOTIVE ENGINEERING

DIPLOMA IN MECHANICAL ENGINEERING

EIT 2113: COMPUTER APPLICATION II

Y2 SEM 1 SUPPLEMENTARY/SPECIAL EXAMINATIONS

SERIES: FEBRUARY 2013

TIME: 2 HOURS

INSTRUCTIONS:

- This paper consists of **FIVE** questions.
- Answer question **ONE (Compulsory)** and any other **TWO** questions.

This paper consists of Three printed pages.

QUESTION 1 (Compulsory)

- a) Define the following terms:
 - i) Assembler (2 marks)
 - ii) Interpreter (2 marks)
 - iii) High level programming language (2 marks)
 - iv) Variables (2 marks)
- b) Explain **THREE** basic data types as used in C++ programming. (3 marks)
- c) Write a simple C++ program. (3 marks)
- d) Differentiate between local and global variables. (4 marks)
- e) Write an algorithm to find the result of a division operation for the given two numbers X and Y. (6 marks)
- f) Draw a floor chart to find the sum and products of the two given number N1 and N2. (6 marks)

QUESTION 2

- a) Write a C++ program to calculate the sum of any **TEN** given numbers. (5 marks)
- b) Write a C++ program which will give the following output. (10 marks)

```
*
*  *
*  *  *
*  *  *  *
*  *  *  *  *
*  *  *  *  *  *
*  *  *  *  *  *  *
*  *  *  *  *  *  *  *
*  *  *  *  *  *  *  *  *
*  *  *  *  *  *  *  *  *  *
```

QUESTION 3

- a) Write an algorithm to find the average of **THREE** given numbers. (4 marks)
- b) Draw a flow chart diagram for the algorithm above (i). (6 marks)
- c) Write a C++ program to implement the algorithm in (i). (5 marks)

QUESTION 4

- a) What is a psuodocode? (2 marks)
- b) What is a problem? (2 marks)
- c) What is an algorithm? (2 marks)
- d) Write a C++ program that will implement the following data. (9 marks)

MARKS	GRADE
> = 90	A
> = 70	B
> = 60	C
> = 50	D
> = 40	E
> = 39	Fail

QUESTION 5

Discuss the **EIGHT** phases of software Development Life cycle (SDLC).

(15 marks)