THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

(A Centre of Excellence)

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

DIPLOMA IN MECHANICAL ENGINEERING
DIPLOMA IN AUTOMOTIVE ENGINEERING
(DAE/DME Y2 SI)

EIT 2113: COMPUTER APPLICATION II

END OF SEMESTER EXAMINATION
SERIES: DECEMBER 2012
TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

This paper consist of **FIVE** questions

Answer question **ONE (COMPULSORY)** and any other **TWO** questions
Maximum marks for each part of a question are as shown
This paper consists of **THREE** printed pages

Question One (Compulsory)

a) Define the following terms:
- **(i)** Machine code **(2 marks)**
- **(ii)** Algorithm **(2 marks)**
- **(iii)** Problem definition **(2 marks)**
- **(iv)** Variable declaration **(2 marks)**
- **(v)** Initialization **(2 marks)**

b) Differentiate between low level and high level programming language. **(4 marks)**
c) What are the limitation of using flow chart diagram in system analysis **(4 marks)**
d) Explain **TWO** basic functions of algorithm in programming. **(2 marks)**
e) Show how to declare multiple C++ variables in one statement. **(2 marks)**
f) Give **TWO** examples of C++ libraries
g) Show to declare a function in C++ **(4 marks)**
h) Give **TWO** advantages of high level programming language. **(2 marks)**

Question Two

a) Explain the following stages in Software Development Life Cycle **(8 marks)**
- **(i)** Problem Definition
- **(ii)** Coding
- **(iii)** Debugging
- **(iv)** Maintenance

b) Study the program below and answer the questions that follow:

```
#include <iostream>
Using namespace std;
Int main ()
{
declaring variable;
Int a;t}
Int b;
Int result;
process
a= 5;
b = 2:
a = a+1

result = a – b;
cout << result

return 0;
}
```

(i) What is the function of the assignment operators **(2 marks)**
(ii) List down all the comment in the above program **(2 marks)**
(iii) What is the function of #include <iostream> **(2 marks)**
(iv) What is the output of the program? **(1 mark)**

Question Three

a) Write an algorithm to find the sum and product of the two given numbers. **(5 marks)**

b) Draw a flow chart diagram to represent the algorithm above (a) **(5 marks)**

c) Write a C++ program to implement the flow chart diagram in (b) **(5 marks)**

Question Four

a) Write a C++ program that can prompt a user to enter **THREE** integers, calculate the average of the three integers and output the result on the screen. **(7 marks)**

b) Show how to declare a function in C++ that returns a value. **(6 marks)**

c) Write a C++ statement to show how to call the function above (a) in the main program. **(2 marks)**

Question Five

a) Draw a flow chart diagram to find the maximum of two given numbers. **(7 marks)**

b) Discuss the different data type in C++ highlighting their importance in programming. **(8 marks)**