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 INFORMATION COMMUNICATION TECHNOLOGY
DIPLOMA IN INFORMATION TECHNOLOGY
(DICT M12/DIT M12)

ECT 2102: STRUCTURED PROGRAMMING (C Programming)

END OF SEMESTER EXAMINATION
SERIES: AUGUST 2012
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 are as shown
This paper consists of **THREE** printed pages

SECTION A (COMPULSORY)

Question One (20 marks)

Explain the following levels of programming Languages, giving advantages and disadvantages for each:

i) Low level programming language
ii) High level programming language
iii) Fifth generation programming language. **(20 marks)**

SECTION B (Answer Any Two Questions)

Question Two (20 marks)

a) Explain the difference between complier and interpreter. **(4 marks)**
b) Draw a program flow chart to read three values, compare them then display the smallest. **(8 marks)**
c) Implement the Q2 (b) above using C Programming language. **(8 marks)**

Question Three (20 marks)

a) The flowchart calculates income tax. Write a C Program corresponding to the flowchart. **(8 marks)**

YES

b) With examples, explain the **THREE** controls in C Programming language. **(8 marks)**

c) Explain any **TWO** types of errors in computer programming. **(4 marks)**

Question Four (20 marks)

a) (i) Explain the term structured programming. **(2 marks)**
(ii) Explain any **FOUR** advantages of structured programming. **(8 marks)**

b) Explain the following standard math library functions.
i) Ceil ()
ii) Pow (X,Y) **(4 marks)**

c) Develop C program having a function to the cube of value X. Given cube = X*X*X **(6 marks)**

Question Five (20 marks)

a) Develop a C program to read twenty integer then calculate sum and average. Use the While loop. **(8 marks)**

b) Explain the term Data Structure as used in programming. **(2 marks)**

c) (i) Explain the term array. **(2 marks)**
(ii) Develop a C program to read ten values, compare them and display the largest. **(8 marks)**