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
(DICT 12M/DIT 12M)

ECT 2102: STRUCTURED PROGRAMMING

SPECIAL/SUPPLEMENTARY EXAMINATION
SERIES: OCTOBER 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** 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)

a) Draw a flowchart to calculate the sum of ten integer values. Use a loop.   **(10 marks)**
b) Implement Q1(a) above using Visual Basic Programming language.   **(10 marks)**

SECTION B (Answer Any Two Questions)

Question Two (20 marks)

c) Explain the following terms:
   i) Object-oriented programming
   ii) Event driven programming.   **(4 marks)**

d) Briefly describe each of the following Integrated Development (IDE) features:
   i) Tool box
   ii) Control
   iii) Form
   iv) Title bar   **(8 marks)**

e) Write a C program to read a student name and the score for a particular subject. The program should output grades as shown: **(8 marks)**

   Above 90   'A'

   80 – 89   'B'

   70 – 79   'C'

   60 – 69   'D'

   Below 60   'FAIL'

Question Three (20 marks)

a) Explain the uses of the following properties of a Data Control.
   i) Data name
   ii) Record source
   iii) Field name
   iv) Data source   **(8 marks)**

b) Describe how you can connect to an MS Access database file called "Student.mdb" from a VB project.   **(10 marks)**

Question Four (20 marks)

a) Explain the uses of the following controls:
   i) List Box
   ii) Text Box
   iii) Check Box
   iv) Combo Box   **(8 marks)**

b) Explain the term data security. **(2 marks)**

c) Write a VB program that will accept the username and password from the user. If the user is "JOHN" and password is "9999" then the user is given access but if username and password are incorrect the user is denied access. **(8 marks)**

Question Five (20 marks)

a) Explain the **TWO** control structures used by Visual Basic Programming language. **(10 marks)**

b) Write a temperature conversion program that converts a Fahrenheit temperature to a Celsius temperature. Provide a TextBox for user input and a Label for displaying the converted temperature. Provide an Input button to read the value from the TextBox: Also provide the user with an exit button to end program execution. Use the following formula: Celsius = 5/9x (Fahrenheit – 32). **(10 marks)**