MURANG'A UNIVERSITY COLLEGE

(A constituent College of Jomo Kenyatta University of Agriculture and Technology)

UNIVERSITY EXAMINATIONS 2014/2015

YEAR TWO SPECIAL/SUPPLEMENTARY EXAMINATION FOR THE DEGREE

OF BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY

BIT 2118: APPLICATION PROGRAMMING 1

COURSE: BscIT   **TIME: 2HRS**

DAY/TIME: Monday 8:00am-10:00am   **DATE:3rd August 2015**

INSTRUCTIONS: *Answer question one and any other two questions*

Question 1: (30 Marks)

a) What is Application Programming?

(2 marks)

b) Identify any FIVE data types in Visual Basic, and use an example to declare a variable for each data type. (10 marks)

c) Describe the following control structures using some Visual Basic examples

    i.   Sequential structure

    ii.   Selection structure

    iii.   Iteration structure

(6 marks)

d) Give the syntax of the InputBox function, and explain each of the parameters used in this function.

(4 marks)

e) Explain the following types of errors with examples from Visual Basic

    i.   syntax error

    ii.   semantic error

    iii.   logical error

(6 marks)

f) Write a program to display the message "Welcome to VB Programming" in a label **lblMessage** when a button **btnMessage** is clicked.

(2 marks)

Question 2 (20 marks)

a) Explain the following terms:

    i.   Object

    ii.   Property

    iii. Event

    iv. Method

    v.   Control   **[5 Marks]**

b) Briefly describe the terms below

    i.   Implicit Declaration

    ii.   Explicit Declaration   **[4 Marks]**

c) Explain the purpose of the Parse method in VB.net   **(1 Mark)**

d) Identify the errors, if any, in the following program, and suggest how you would solve them.

```
Dim strTest, 123str As String
strTest = 34
messageBox.Show("Welcome to VB programming")
"testing" = strTest
txtTest.Text = strTest
Dim intVar As Integer
```

                                                      (6 marks)

e) Explain the function of the following controls

    (i)   Listbox

    (ii)   Frame

                                                        (4 marks)

Question 3 (20 marks)

a) A program is required to calculate the average of the first twenty positive integers, and display the sum in **lblSum** and average in **lblAverage**.

Required:

    i.   Write the above program using a **Do.While** loop   **(5 marks)**

    ii.   Rewrite the above program using **Do..Until** loop   **(5 marks)**

     iii.   Rewrite the above program using a **For..Next** loop   (4 marks)

b) Explain the functions of each of the following Visual Basic IDE components

     i.   Project Explorer

     ii.   Object Browser

     iii.   Properties Window

(6 marks)

Question 4 (20 marks)

a) Write a program that accepts money in US dollars through an Input Box function and converts it to Kenya Shillings, through the use of a function named *convert.* The program should output the Kenya Shilling value through a Message Box function upon the click of a command button. (1 US Dollar = 89 Kshs)   (8 Marks)

b) You are provided with a MS-Access database (StudentsDatabse.mdb), which has one table (Student) and a Visual Basic form interface to allow adding, deleting and searching records.

Required:

Write code to allow linking to the database and provision of the above functions.

(12 marks)