UGANDA MARTYR'S UNIVERSITY

FACULTY OF SCIENCE

DEPARTMENT OF INFORMATION SYSTEM

EXAMINATIONS 2011/2013

COURSE: DIPLOMA CS & BSC IT(III)

COURSE UNIT: PROGRAMING METHOD III VB

TIME: 3 HOURS (9:00AM – 12:00 NOON)

TIME: 21ST Friday December 2012

EXAMINATION INSTRUCTIONS

1. Attempt any five(5) questions from sections.

2. Do not open this booklet until told to do so

3. All rough work should be done in your answer booklet.

Question 1

(a) A typical Microsoft Visual Basic development environment has the following.
   - (i) Solution explorer
   - (ii) Properties window
   - (iii) Tool box

   You are required to describe briefly each of the above.   [2 marks @]

(b) Explain what you understand by the following terms.   [2 marks @]
   - (i)   Variable
   - (ii)   Const Statement
   - (iii)   Empty string
   - (iv)   Arguments

(c) Differentiate between promotion and demotion of variable   [4 marks]

   which ?

(d) Of the two (promotion and demotion of variable) is dangerous? Explain why
                                                                             [2 marks]

Question 2:

(a) How does a control differ from an event in regards to VB.NET.   [4 marks]
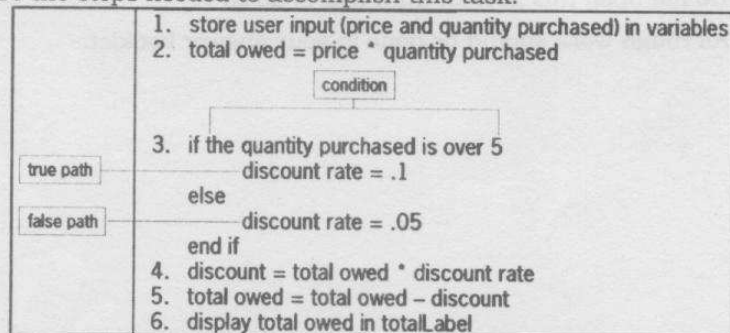
(b) What is flow chart?   [3 marks]

                                                                flow

(c) With help of diagram describe any three symbols of a follow chart. [6 marks]

(d) What is the function of lines in a flow chart?   [2 marks]

(e) Below are the steps needed to accomplish this task.

```
1.  store user input (price and quantity purchased) in variables
2.  total owed = price * quantity purchased

         condition

3.  if the quantity purchased is over 5
true path        discount rate = .1
         else
false path        discount rate = .05
         end if
4.  discount = total owed * discount rate
5.  total owed = total owed – discount
6.  display total owed in totalLabel
```

You are required to draw the corresponding flow chat. [5 marks]

Question 3

(a) Explain the meaning the following in relation to Visual Basic .Net. [2 marks]
- (i) Access key
- (ii) Default button
- (iii) Dialog Box
- (iv) Focus
- (v) Control

(b) What is a Selection Structure? [2 marks]

(c) State and describe any two selection structures covered in class. [4 marks]

(d) Describe both the True and False path. [4 marks]

Question4:

When describing the User Interface, there are standards to follow.

(a) List five Windows GUI guidelines for designing a User Interface. [4 marks]

(b) List three Container Controls and state their purpose. [6 marks]

(c) Describe four benefits for following the Windows standards for menus, positioning of buttons, colors, etc . [4 marks]

(d) List three guidelines used when arranging Controls on a Form. [3 marks]

(e)(a) List the steps of How to Plan an Application in VB.NET [3 marks]

Question 5:

A variable is a computer memory locations used to temporarily store data while an application is running. Contents can change during run time.

(a) Describe any four rules for naming variables in VB.NET. [4 marks]

(b) List and describe three components of a Declaration statement. [3 marks]

(c) Using the following diagrams below, describe what the code snippet can accomplish

[6 marks]

- (i) Dim hours As Integer
     Dim payRate As Double
- (ii) Dim isDataOk As Boolean = True
- (iii) Dim message As String = "Good Morning"

(d) In using the TryParse method, the Visual Basic environment ensure that; there is a Part of every numeric data type's class, used to convert a string to that numeric data type. Describe the two arguments of the Basic syntax of TryParse method. [3 marks]

(e) Describe what the following code does. [4 marks]

Private Sub Button2_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button2.Click

MessageBox.Show("WELCOME", "TEST MESSAGE")

End Sub

Question 6

(a) Most applications in the real world today need to access a database. During the semester we connected a simple application to Microsoft Access Database.

   (i)   Describe the meaning of a DataSet. [2 marks]
   (ii)   State the purpose of a DataGridView control. [2 marks]
   (iii)   State the four functions of a BindingNavigator control. [4 marks]
   (iv)   List five objects that are placed in the component tray when Visual Studio.Net is used to connect a form to database. [5marks]

(b) What is the difference between TryParse and Const? [4 marks]

(c) Describe what the following code does. [3 marks]

```
      If operation = "A" Then
            answer = num1 + num2
      Else
            answer = num1 - num2
      End If
      answerLabel.Text = answer.ToString()
End Sub
```