



PAN AFRICA CHRISTIAN UNIVERSITY

DICT

END OF TERM EXAMINATION

DEPARTMENT: COMPUTING & INFORMATION TECHNOLOGY

COURSE CODE: DICT0131

CAMPUS: ROYSAMBU

COURSE TITLE: EVENT DRIVEN PROGRAMMING

EXAM DATE: TUESDAY, DATE (DDTH MONTH YEAR)

TIME: START HOUR – END 08:00-11:00 HRS

INSTRUCTIONS

- This exam script has **TWO (2)** sections.
- Read all questions carefully before attempting.
- Answer All questions in Section **A** and any other THREE questions in Section **B**.
- Write only your **student number** on the answer booklet provided.
- None programmable calculators permitted
- Calculators on phones, tablets and computers are NOT permitted in Theory Papers

SECTION A

(Answer ALL questions in this section)

Question 1

Study the interface below and answer the questions that follow

The screenshot shows a Windows application window titled 'Form1'. Inside the window is a group box titled 'Personal Details'. Within this group box, there are three input controls: a text box for 'First Name', a text box for 'Surname', and a dropdown menu for 'Gender'. The dropdown menu is currently open, showing 'Male' and 'Female' as options. Below these controls is a 'SAVE' button.

- a) State the significance of the control named personal details in event driven programming **(1 Mark)**
- b) Identify the control used to choose gender **(1 Mark)**
- c) Describe TWO ways to add items in the control used to choose gender **(2 Marks)**
- d) Write a code snippet that changes the background color of Form 1 to blue

(2

Marks)

- e) Write an event-driven program that displays the details captured by the controls in the personal details group box on a message box **(4 Marks)**

QUESTION 2

Study the program below and answer the questions that follow:

```
Sub DisplayFullName()
```

```
    ' Prompt user for first name
```

```
Dim firstName As String
```

```
firstName = InputBox("Please enter your first name:", "First Name")
```

```
' Prompt user for surname
```

```
Dim surname As String
```

```
surname = InputBox("Please enter your surname:", "Surname")
```

```
' Concatenate first name and surname to form full name
```

```
Dim fullName As String
```

```
fullName = firstName & " " & surname
```

```
' Display the full name in a message box
```

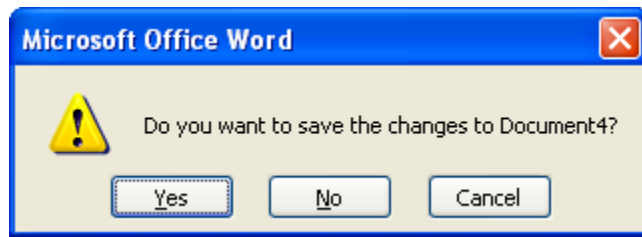
```
MsgBox "Your full name is: " & fullName, vbInformation, "Full Name"
```

```
End Sub
```

- a) Justify the data types appropriate for handling names in this program **(2 Marks)**
- b) Explain how the Input Box function in this program work. **(2 Marks)**
- c) Differentiate the MsgBox function from the InputBox function in terms of user interaction **(2 Marks)**
- d) State why it is useful to display the full name using a message box instead of directly outputting it to the console. **(2 Marks)**
- e) Describe how this program can be modified to handle cases where the user might leave an input blank. **(2 Marks)**

QUESTION 3

- a) Explain the term control as used in event driven programming **(2 Marks)**
- b) Describe the steps of adding design time controls on to a form **(4 Marks)**
- c) Write a code that create the following dialog box **(4 Marks)**



QUESTION 4

- a) Explain TWO drawbacks occasioned by use of arrays in event driven programming **(4 Marks)**
- b) Using your knowledge on arrays, write an event driven program to display the days of the week **(6 Marks)**

QUESTION 5

- a) The following is a log in form. Write the code that will enable the user to proceed if and only if a correct password is entered on the textbox, on click of the proceed button. (Use admin as the password). The program should not allow empty password. **(5 Marks)**



- b) You are required to write a program to evaluate age of clients before they can be admitted for a function. Using appropriate control structures, devise an event driven code that will enable the display of the comments based on the following table: **(5 Marks)**

age	comments
-----	----------

<i>Less than 14</i>	<i>Not allowed</i>
<i>14-17</i>	<i>Allowed upto 6 pm</i>
<i>18-25</i>	<i>Allowed up to 10 pm</i>
<i>Above 25</i>	<i>Unlimited stay</i>

QUESTION 6

Study the program below and answer the questions that follow:

```
Public Class EvenNumbersForm
    Private Sub EvenNumbersForm_Load(sender As Object, e As
EventArgs) Handles MyBase.Load
        ' Loop through numbers from 150 down to 50
        For i As Integer = 150 To 50 Step -1
            ' Check if the number is even
            If i Mod 2 = 0 Then
                ' Add the even number to the ListBox
                ListBox1.Items.Add(i)
            End If
        Next
    End Sub
End Class
```

- a) Explain how this program determines if a number is even or odd. **(2 Marks)**
- b) Justify why does the loop start from 150 and end at 50 with a step of -1.
(2 Marks)
- c) Describe what would happen if the loop was set to start from 50 and go to 150.
(2 Marks)
- d) State how you would modify the code to list odd numbers instead of even numbers. **(2 Marks)**
- e) Justify the control structure is used in this program. **(2 Marks)**

**PAN AFRICA CHRISTIAN UNIVERSITY
EXAMINATIONS PAPER**



EOF