



UNIVERSITY OF EMBU

2017/2018 ACADEMIC YEAR

SECOND SEMESTER EXAMINATIONS

**FIRST YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE
(INFORMATION TECHNOLOGY)**

SIT 121: EVENT DRIVEN PROGRAMMING

DATE: APRIL 3, 2018

TIME: 2:00 PM – 4:00 PM

INSTRUCTIONS:

Answer Question ONE and ANY other two Questions

QUESTION ONE (30 MARKS)

- a) With the aid of an example in each case, distinguish between String and Boolean data type in visual basic programs (4 marks)
- b) Outline four advantages of using visual basic program when developing a system application (4 marks)
- c) Describe any FOUR elements in IDE environment (4 marks)
- d) Giving the syntax in each case, explain three types of *if* conditional control structures in visual basic (6 marks)
- e) Differentiate toolbox and tool bar as used in visual basic programs (4 marks)
- f) Differentiate between general and private procedures in visual basic programs and give syntax for each case (4 marks)
- g) Write a visual basic program that would display seven days in a week to a ComboBox (4 marks)

QUESTION TWO (20 MARKS)

- a) In a cage there are seven expectant dogs, in each day; one dog gives birth to four puppies.
Using do while loop in visual basic, write a code that will display the total number of puppies in each day for the seven days. (6 marks)
- b) With aid of an example, distinguish between the name property and caption property as used in visual basic program (4 marks)
- c) Write a visual basic program that would generate the following numbers as an output on a form. Use a *for next* statement (6 marks)
- 12345
1234
123
12
1
- d) The following is a code for handling exceptions. Identify FOUR keywords used in the program code (4 marks)

```
Module exceptionProg
  Sub division(ByVal num1 As Integer, ByVal num2 As Integer)
    Dim result As Integer
    Try
      result = num1 \ num2
    Catch e As DivideByZeroException
      Console.WriteLine("Exception caught: {0}", e)
    Finally
      Console.WriteLine("Result: {0}", result)
    End Try
  End Sub
  Sub Main()
    division(25, 0)
    Console.ReadKey()
  End Sub
End Module
```

QUESTION THREE (20 MARKS)

- a) Distinguish between do...while and do...until loop as used in visual basic programming (4 marks)
- b) Identify a data type appropriate to store each of the following data items in visual basic program:
- i) Gender where a true or false values are used (2 marks)
 - ii) Number of students in each technical training institution in the country (2 marks)
 - iii) The distance between two town in kilometre rounded to 1 decimal place (2 marks)

- c) Table 1 shows a grading system used by BrightFuture University to compute students' grade. Use it to answer the following:

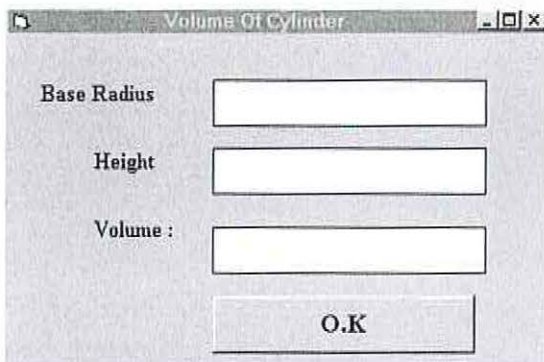
AVERAGE	GRADE
70-100	A
60-69	B
50-59	C
40-49	D
LESS THAN 40	F

Write a Visual BASIC program that accepts a mark value in a text box and then produces the appropriate grade in a label. Use *select case structure* (6 marks)

- d) Using an example for each, differentiate between Multiple Document Interface and Single Document Interface (4 marks)

QUESTION FOUR (20 MARKS)

- a) Write a Visual BASIC code that will derive the interface of calculating the volume of a cylinder as shown in the figure below (8 marks)



- b) Draw an interface that will be used by the following visual Basic code (8 marks)

```
Private Sub test2_Click()
Dim testMsg2 As Integer
testMsg2 = MsgBox("Click to Test", vbYesNoCancel + vbExclamation, "Test Message")
If testMsg2 = 6 Then
display2.Caption = "Testing successful"
ElseIf testMsg2 = 7 Then
display2.Caption = "Are you sure?"
```



```
Else  
display2.Caption = "Testing fail"  
End If  
End Sub
```

c) Differentiate between a fixed size array and dynamic array (4 marks)

QUESTION FIVE (20 MARKS)

- a) Elaborate the relevance of the following objects when connecting an application database
- i) Provider (2 marks)
 - ii) Data source (2 marks)
 - iii) Connection object (2 marks)
- b) Describe any five benefits of using database systems in development of a Library Management system that uses visual basic interface (10 marks)
- c) Differentiate between InputBox() function and MsgBox () Function (4 marks)

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