

CHUKA



UNIVERSITY

**UNIVERSITY EXAMINATIONS**

**CHUKA/IGEMBE**

**FIRST YEAR EXAMINATION FOR THE AWARD OF DIPLOMA IN COMPUTER SCIENCE**

**COSC 0242: DESKTOP APPLICATION DEVELOPMENT**

**STREAMS: DIP COMP SCI Y2S1**

**TIME: 2 HOURS**

**DAY/DATE: MONDAY 05/07/2021**

**8.30 A.M – 10.30 A.M**

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**INSTRUCTIONS:**

**There are 5 questions in this paper. Answer Question 1 –Compulsory, and Any Other Two Questions.**

**Question 1 (30Marks) –Compulsory Question**

a) Describe in detail the following concepts of object oriented:

- (i) Objects (2 marks)
- (ii) Properties (2 marks)
- (iii)Methods (2 marks)
- (iv) Syntax (2 marks)
- (v) Pseudo code (2 marks)
- (vi) Algorithm (2 marks)
- (vii) Class (2 marks)

b) Describe the functions of the following parts/windows in the Visual Studio environment:

- (i) Document window (2 marks)
- (ii) Solution window (2 marks)
- (iii)Properties window (2 marks)
- (iv) Code editor (2 marks)
- (v) Toolbox (2 marks)

c) Explain the following VB .NET code extracts:

- (i) Dim x As Integer (1 mark)
- (ii) Label1.Text="Visual Basic.Net" (1 mark)
- d) What is an exception in VB.Net and Give one example? (2 Marks)
- e) What do you understand by the terms breakpoint and debugging in VB.NET? (2 Marks)

**SECTION B: ANSWER ANY TWO QUESTIONS**

**QUESTION TWO (20 MARKS)**

- a) What is a variable? (1 mark)
- b) List and explain the functions of any three controls found in .NET IDE. (3 marks)
- c) Differentiate between scope and lifetime of a variable. (3 marks)
- d) Differentiate between the following variable declaration statements and giving examples:
  - (i) Dim (2 marks)
  - (ii) Private (2 marks)
  - (iii) Public (2 marks)
- e) Given the following numbers 10 and 5, write a visual basic program to perform division on these two numbers when a button is clicked, and the results displayed on the message box object. (4 marks)
- f) Locate and explain the errors found in the code below: (3 marks)

```
Private Sub Button1_Click (ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button1.Click
```

```
    Dim x As Integer;
    x = y * w;
    MsgBox("x")
```

```
End Sub
```

**QUESTION 3 (20 MARKS)**

- a) What are some of the advantages of VB.Net? [5 Marks]
- b) STATE and EXPLAIN three types of errors in Visual Basic .NET [6 Marks]
- c) What is the difference between server side scripting and client side scripting? [4 Marks]

- d) GIVE two examples and EXPLAIN what are ActiveX controls. [5 Marks]

**QUESTION 4 (20 MARKS)**

- a) What is a comment? (1 mark)  
b) Give one reason for using comments in your programs. (1 mark)  
c) Explain one advantage of object oriented development approach to programming. (2 marks)  
d) Given the following code extract:

```
Private Sub btnClick_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
HandlesbtnClick.Click
```

```
    lblName.Text="Today is Monday"
```

```
End Sub
```

- (i) Describe the following concepts:

- a) Keywords (2 marks)  
b) Procedure (2 marks)  
c) Handles (2 marks)  
d) Private (2 marks)  
e) Sub (2marks)

- (ii) Differentiate between an event and an event procedure. Identify them from the code above. (4 marks)

- (iii) Write a line of code to include a meaningful comment in the above code extract.(2 marks)

**QUESTION 5 (20 MARKS)**

- a) Explain the functions of the following form methods in VB.Net

- (i) Close (1 mark)  
(ii) Hide (1 mark )  
(iii)Show (1 mark)

- b) Write a simple code to display the text "Programming Language" in a message box (2 marks)  
c) Name and describe the different modes of operation of visual basic IDE. (6 marks)

d) Write a visual basic program that takes in the mark of a student, and displays the student's grade as the output when a button is clicked, using the criteria given below. Include comments in your program. (5 marks)

0 – 39: F

40 – 49: D

50 – 59: C

60 – 69: B

70 – 100: A

e) Describe clearly the following control structures. Use example code extracts to show their use.

(i) If ... then (2 marks)

(ii) If ... then ... else (2 marks)

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