

CHUKA



UNIVERSITY

**UNIVERSITY EXAMINATIONS**

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

**COSC 0242: DESKTOP APPLICATION DEVELOPMENT**

**STREAMS:DIP COMP SCI**

**TIME: 2 HOURS**

**DAY/DATE: MONDAY 20/09/2021**

**11.30 A.M – 1.30 P.M**

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**INSTRUCTIONS:**

- Answer question **ONE** and **TWO** other questions
- Do not write anything on the question paper
- This is a **closed book exam**, No reference materials are allowed in the examination room
- There will be **NO** use of mobile phones or any other unauthorized materials
- Write your answers legibly and use your time wisely.
- Marks are awarded for clear and concise answers.

**SECTION A (ANSWER ALL QUESTIONS)**

**QUESTION ONE**

a) Describe in detail the following concepts of programming as applied in Desktop Application Development:

- |                |           |
|----------------|-----------|
| (i) Variables  | (2 marks) |
| (ii) Operators | (2 marks) |
| (iii) Keywords | (2 marks) |
| (iv) Syntax    | (2 marks) |
| (v) Comments   | (2 marks) |

(vi) Procedures (2 marks)

(vii) States and Transitions (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)

c) Explain the following VB .NET code extracts:

(i) Dim x As Integer (2 mark)

(ii) Label2.Text="Hello Students." (2 mark)

d) Differentiate between Objects , Methods and Controls as applied in Visual Basic Desktop Application Development (6 Marks)

## **SECTION B: ANSWER ANY TWO QUESTIONS**

### **QUESTION TWO (20 MARKS)**

a) List and explain the functions of any four controls found in .NET IDE. (4 marks)

b) Differentiate between scope and lifetime of a variable. (2 marks)

c) Differentiate between the following variable declaration statements and giving examples:

(i) Dim (2 marks)

(ii) Private (2 marks)

(iii) Public (2 marks)

d) 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. (5 marks)

e) 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 Double;  
x = y * w;  
MsgBox("x")
```

End Sub

**QUESTION 3 (20 MARKS)**

- a) Explain the THREE major parts applications written for ASP.NET consist of (6 Marks)
- b) State and EXPLAIN three types of errors in Visual Basic .NET (6 Marks)
- c) Elaborate on the differences between server side scripting and client side scripting? (4 Marks)
- d) Describe using a diagram how web controls are accessed using ASP.NET (4 Marks)

**QUESTION 4 (20 MARKS)**

- a) Outline TWO reasons for using comments in your Visual Basic programs. (2 mark)
- b) Explain one advantage of object oriented development approach to programming. (2 marks)
- c) Explain what an exception in VB.Net is and give one example of such. (3 Marks)
- d) Explain the terms breakpoint and debugging as applied in Visual Basic. (2 Marks )
- e) 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) Handles (2 marks)
- b) Private (2 marks)

c) Sub

(2marks)

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

(3 marks)

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

**QUESTION 5 (20 MARKS)**

a) Write a simple code to display the text “Programming Language” in a message box (2 marks)

b) Name and describe the different modes of operation of visual basic IDE. (6 marks)

c) 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 you program. (6 marks)

0 – 39: F

40 – 49: D

50 – 59: C

60 – 69: B

70 – 100: A

d) Describe clearly the following decision statements. Use example code extracts to show their use.

(i) If ... then..Else (3 marks)

(ii) If ... then ... ElseIf (3 marks)

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