

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

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)
