

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

SECOND 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: TUESDAY 11/04/2023

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 (30 Marks)

- Briefly describe the role of the following important elements of visual basic control.
 - Properties [2 marks]
 - Methods [2 marks]
 - Events [2 marks]
- Using an example, illustrate how VB.NET represents comments. [2 marks]
- Study the code below and answer the following questions that follow.

Module Module 1

```
Dim intInput As integer
```

```
System.Console.WriteLine ("Enter an integer...")
```

```
intInput = Val(System.Console.ReadLine())
```

```
Select Case intInput
```

```
Case 1
```

```
System.Console.WriteLine ("Thank You!")
```

```
Case 2
```

```
System.Console.WriteLine ("That is good!")
```

```
Case 3 to 7
```

```
System.Console.WriteLine ("OK!")
```

Case Is >7

System.Console.WriteLine ("Too big!")

Case Else

System.Console.WriteLine ("Not a right number!")

End Select

End Sub

End Module

- i. Describe what the code generally does. [6 marks]
- ii. Describe what the line **intInput = Val(System.Console.ReadLine())** does [3 marks]
- iii. Describe what the line **System.Console.WriteLine ("Enter an integer!")** does [2 marks]
- iv. Describe what the line "Dim intInput as integer" does (2 marks)
- d. Define the term software prototype and state Two advantages of prototyping [3 Marks]
- e. State THREE windows form controls used during user interface design [4 marks]
- f. List and explain any TWO properties associated with a textbox in Visual Basic .Net [4 marks]

SECTION B (ANSWER ANY TWO QUESTIONS)

QUESTION TWO (20 MARKS)

- a. Discuss the merits and demerits of desktop applications over web applications. [6 marks]
- b. Give three data types supported by VB.NET, for each data type, declare a variable [6 marks]
- c. Illustrate the use of three comparison operators and two assignment operators in VB.NET. [5 marks]
- d. Differentiate between module and public variable scopes [3 marks]

QUESTION THREE (20 MARKS)

- a. The user interface (UI) is one of the keys to a successful application. Discuss FIVE user interface design principles [10 marks]
- b. Discuss the steps followed when designing login and registration form user interfaces in Visual Basic .Net [10 marks]

QUESTION FOUR (20 MARKS)

- a. As a desktop application developer, you have been awarded a tender to design and develop a pharmacy management system. Briefly explain each stage of your management system Development Life Cycle. [12 marks]
- b. Differentiate the logic employed by **Do** and **for ...Next** loops. [4 marks]

- c. State and explain TWO Software Development Life Cycle (SDLC) models. [4 marks]

QUESTION FIVE (20 Marks)

- a. VB.NET exception handling is built upon keyword: Try, Catch, Finally and Throw. Briefly explain the meaning of these keywords used for error handling. [8 marks]
- b. List and explain any FOUR events associated with a button in Visual Basic .Net [8 marks]
- c. Describe how event listening works in Desktop Application Development [4 marks]
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