

**UNIVERSITY COLLEGE TATI (UC TATI)****FINAL EXAMINATION QUESTION BOOKLET**

COURSE CODE : BCS2123

COURSE : VISUAL PROGRAMMING

SEMESTER/SESSION : 1/ 2023-2024

DURATION : 3 HOURS

Instructions:

1. This booklet contains 5 questions. Answer **ALL** questions.
2. All answers should be written in the answer booklet.
3. Write legibly and draw sketches wherever required.
4. If in doubt, raise your hands and ask the invigilator.

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO**THIS BOOKLET CONTAINS 6 PRINTED PAGES INCLUDING THE COVER**

QUESTION 1

The C# Integrated Development Environment (IDE) includes various tools for programmer such as Form Designer, Code Editor and Compiler.

- a) Describe **FIVE (5)** common controls in C#. Support your answer with appropriate illustration. (20 marks)
- b) Outline **FOUR (4)** industry standards in designing the user interface for C# programs. (8 marks)

QUESTION 2

Write the correct C# statements for the following:

- a) Declare **kursus** as a string variable and initialize it to "C#". (3 marks)
- b) Declare **berat** as a decimal variable and initialize it to 25.75. (3 marks)
- c) Declare **umur** as an integer variable with a value of 21. (3 marks)
- d) Display **purata**, a float variable, in averageTextBox. (2 marks)
- e) Storing the value of priceTBox into **totalPriceDec**, a decimal variable. (3 marks)

QUESTION 3

- a) Describe **FOUR (4)** relational operators in C#. Support your answer with appropriate example. (16 marks)
- b) Describe **TWO (2)** logical operators in C#. Support your answer with appropriate example. (8 marks)
- c) Consider the C# statements in Figures 1 to 3. Determine the output in **ResultTextBox**.

- i) (2 marks)
- ```
// aStr is a string variable with the value of "BCSC"
// bStr is a string variable with the value of "BCNS"

if (aStr.CompareTo(bStr)>0)
 ResultTextbox.Text = aStr + " UCTATI";

else if (aStr.CompareTo(bStr)<0)
 ResultTextbox.Text = + bStr + " FKMPT";

else
 ResultTextbox.Text = "Ralat Input";
```

**Figure 1**

ii) (2 marks)

```
// statusRB is a radio button and is currently checked
// negeriTB is a text box and has the value of "Terengganu"

if (statusRB.Checked && negeriTB.Text.ToUpper() != "PAHANG")
 ResultTextbox.Text = "Sila Masukkan Nama Pemohon";

else if (statusRB.Checked || negeriTB.Text.ToUpper() == "TERENGGANU")
 ResultTextbox.Text = "Sila Masukkan Alamat Pemohon";

else
 ResultTextbox.Text = "Ralat, Sila Cuba Sekali Lagi";
```

**Figure 2**

iii) (2 marks)

```
// quantityTB is a textbox and has the value of "Putrajaya"

if (quantityTextBox.Text != "")
{
 try
 {
 quantityDec = decimal.Parse(quantityTextBox.Text);
 ResultTextbox.Text = "Berjaya Disimpan";
 }
 catch
 {
 messageString = "Format tidak sah!";
 ResultTextbox.Text = messageString;
 }
}
else
{
 messageString = "Sila masukkan kuantiti.";
 ResultTextbox.Text = messageString;
}
```

**Figure 3**

**QUESTION 4**

- a) Write a **header** for a private method that returns a decimal value and passes an int value. (5 marks)
- b) Identify **THREE (3)** errors in the program in Figure 4 by listing the line number and rectifying them. (9 marks)

```
1 private void calculateButton_Click(object sender, EventArgs e) {
2 decimal jumlahDec;
3 jumlahDec = int.Parse(jumlahTextBox.Text);
4 SSTTextBox.Text = KiraSST(jumlahDec).ToString("C");
5 }
6
7 private decimal SST (decimal jumlahJualanDec) {
8 if (jumlahJualanDec < 500M)
9 {
10 return 0M;
11 }
12 else if (jumlahJualanDec <= 1000M)
13 {
14 return 0.01M * jumlahJualanDec;
15 }
16 default:
17 {
18 return 0.02M * jumlahJualanDec;
19 }
20 }
```

**Figure 4**

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**QUESTION 5**

- a) List **THREE (3)** parts of the **for** loop in C#. Support your answer with appropriate example. (6 marks)
- b) Describe the **while** loop in C#. Support your answer with appropriate example. (6 marks)
- c) Poor programming practice may lead to an **endless** loop. Give an example of a program that demonstrates an endless loop. (2 marks)

----- End of Question -----