	END OF SEMESTER 2 EXAM		JUNE 2020
	COURSE : DATABASE WITH HUMAN COMPUTER INTERFACE		
	SPECIALTY : HND2 - SWE		
	EXAMINER: FOKAM MICHEL & TATSOPTEU E. ENDELLY		Duration: 2H
DOCUMENTS AUTHORISED NO <input type="checkbox"/>	CALCULATORS AUTHORISED: NO <input type="checkbox"/>	INSTRUCTIONS: ANSWER ALL QUESTIONS	

SEXTION A : MCQs (12 Marks)

Copy the table below and fill in the correct letter for each question. If you change your mind, carefully erase it and fill the new answer. Each question carries **1 mark**.

1	2	3	4	5	6	7	8	9	10	11	12

1. Visual Studio .NET provides which feature:

- a.) debugging. b.) application deployment. c.) syntax checking. d.) All of the above.

2. Which is true about the name and text property of a control?

- a.) They are the same when the control is first created.
b.) The text property changes to match any changes in the name property.
c.) The name property changes to match any changes in the text property.
d.) They are never the same unless the programmer makes it that way.

3. An object is composed of:

- a.) properties. b.) methods. c.) events. d.) All of the above.

4. Which statement about objects is true?

- a.) One object is used to create one class. b.) One class is used to create one object.
c.) One object can create many classes. d.) One class can create many objects.

5. The Button control can be activated:

- a.) programmatically through the click event.
b.) by clicking the button with the mouse.
c.) with the form's Default Button property.
d.) All of the above.

6. In event-driven programming an event is generated by:

- a.) the system. b.) a user's action. c.) the program itself. d.) All of the above.

7. Which method of a ListBox will remove just one item at a time?

- a.) Items.RemoveAt b.) Item.RemoveAt c.) Items.ClearAt d.) Item.ClearAt

8. When the user clicks a button, _____ is triggered.

- A.) an event B.) a method C.) a setting D.) a property

9. What is the correct statement when declaring and assigning the value of 100 to an Integer variable called numPeople

- A.) Dim numPeople = B.) Dim numPeople = Int(100)
C.) numPeople = 100 D.) Dim numPeople As Integer = 100

10. Which of the following statements is guaranteed to pass the variable numVar by value to the Sub procedure Tally?

- A.) Tally(numVar) B.) Tally(ByVal numVar)
C.) Tally((numVar)) D.) Tally(ByVal numVar As Double)

11. Which one of the following is true about arguments and parameters?

- A.) Arguments appear in Call statements; parameters appear in Sub statements.
B.) Parameters appear in Call statements; arguments appear in Sub statements.
C.) They are synonymous terms.
D.) They are completely unrelated in a program.

12.

Dim count As Integer = 2

Do

 MessageBox.Show("VB.NET")

 count = count + 2

Loop While count > 10

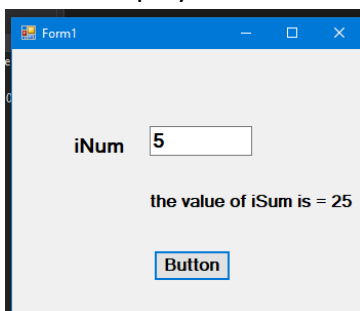
How many times will the MessageBox.Show method in the code above be processed?

- a.) 1 b.) 4 c.) 5 d.) 10

SECTION B (30 Marks)

Answer the following questions in the given order, Label your answers correctly and present your work neatly, using good English. Marks allocation for each question is given on the right.

1. i. Discuss about the salient features of the following programming approaches: **procedural**, **Object Oriented** and **Event-driven** programming language. Give an example of language for each approach. **(3 marks)**
ii. What is an event? Do events have return type? **(2 marks)**
iii. What is **.NET Framework**? State its components **(2 marks)**
iv. What difference do you make between console application and window application? **(2 marks)**
v. Mention the namespace that is used to include .NET Data Provider for SQL server in .NET code. **(1 mark)**
vi. State the importance of a Button control? **(1 mark)**
2. The aim of this section is to write a program for the control below:
i. Write a Private Sub Procedure namely ProTotal. The ProTotal should contain two integer parameter variables passing by references. The two variables are given the name as iNumber and iTotal. **(1 mark)**
ii. Write a calculation statement in ProTotal sub procedure. The calculation statement is as follow: iTotal is equal to iNumber multiply iNumber. **(1 mark)**
iii. Write a statement that declares iNum and iSum as integer. **(1 mark)**
iv. Write an assignment statement that assigns the variable iNum to 0 and iSum to 0. **(1 mark)**
v. Write a statement that assign InputTextNum.text to variable iNum. The assignment statement should include the statement of integer try parse. **(1 mark)**
vi. Write a statement that to call the sub procedure namely ProTotal. The statement should include the argument list of variable iNum and iSum. **(1 mark)**
viii. Display the iSum variable in LabelBox. The iSum variable should be convert to String before display. **(1 mark)**



3. Consider the following Maths class with her two functions.

Public Class Maths

Function f1(n As Integer)

If n = 0 Then

Return 1

Else

Return n * f1(n - 1)

End If

End Function

Function f2(b As Integer, e As Integer)

If e = 0 Then

Return 1

Else

Return b * f2(b, e - 1)

End If

End Function

End Class

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|------|--|-----------|
| i. | f1 and f2 are what type of function definition? | (1 mark) |
| ii. | Display how to obtain f1(4) and f2(2,3) | (4 marks) |
| iii. | State what each of the two functions perform. | (1 mark) |
| iv. | Implement the iterative counterpart of f2. | (2 marks) |
| v. | Create two object m1 and m2 of the Maths class and apply the above class functions on them to compute 3^2 and $\binom{5}{2}$ knowing that $\binom{n}{k} = n!/k!(n-k)!$ | (4 marks) |