



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS**

**DEPARTMENT OF INFORMATION SYSTEMS**

**UNIVERSITY EXAMINATION FOR THE DEGREE BACHELOR OF SCIENCE IN  
INFORMATION COMMUNICATION TECHNOLOGY**

**YEAR THREE: SEMESTER TWO**

**3<sup>rd</sup> YEAR 2<sup>nd</sup> SEMESTER 2016/2017 ACADEMIC YEAR**

**MAIN CAMPUS**

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**COURSE CODE: ICT 3213**

**COURSE TITLE: PROGRAMMING IN .NET**

**DATE:**

**TIME:**

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**INSTRUCTIONS**

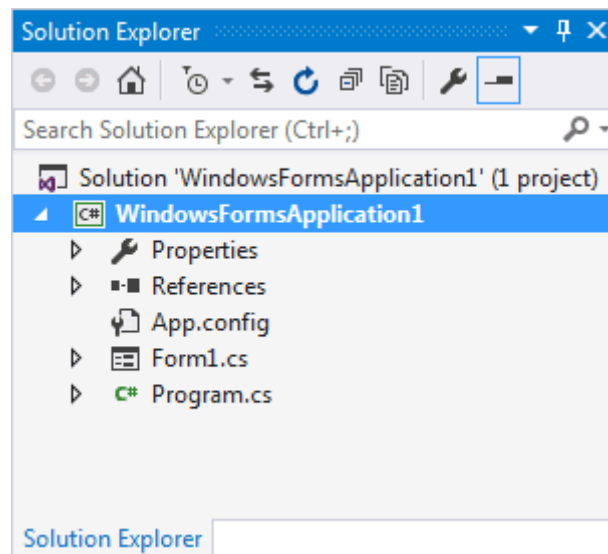
- 1. Answer Question 1 (Compulsory) and ANY other TWO questions**
- 2. Candidates are advised not to write on the question paper**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**

## Question One

- a) What is Microsoft .NET? And what was its main intention in programming development world. **(4 Marks )**
- b) Describe some sample. NET programing language platforms, their basic syntaxes and structures. **(6 Marks)**
- c) Write short notes on each of the following and spell out what each does in a programing environment. **(2 Marks Each)**
  - I. The Common Language Specification (CLS)
  - II. The Framework Base Class Libraries (BCL)
  - III. The Common Language Runtime (CLR)
- d) Define the following programing concepts with a simple illustration on what happens at each level **(2 Marks Each)**
  - I. Source Code
  - II. Object Code
- e) What are the features of C# programming Language? **(4 Marks )**

Describe what each of the following solutions window properties do in C# programming

**(6 Marks)**



## Question Two

- a) Write a C# Sharp program to print Hello and your name in a separate line. **(5 Marks)**
- b) Write a C# Sharp program to print the sum of two numbers. **(5 Marks)**
- c) . Write a C# Sharp program to print the result of dividing two numbers. **(5 Marks)**
- d) Write a C# Sharp program to print the result of the specified operations. **(5 Marks)**

*Test data:*

$1 + 4 * 6$

$( 35 + 5 ) \% 7$

$14 + -4 * 6 / 11$

$2 + 15 / 6 * 1 - 7 \% 2$

### Question Three

- a) Write a C# Sharp program to print the output of multiplication of three numbers which will be entered by the user.

*Test Data:*

Input the first number to multiply:

Input the second number to multiply:

Input the third number to multiply:

**(5 Marks)**

- b) Write a C# Sharp program to print on screen the output of adding, subtracting, multiplying and dividing of two numbers which will be entered by the user. *Test*

*Data:*

Input the first number:

Input the second number:

**(5 Marks)**

- c) Come up with a C# Sharp program that takes a number as input and print its multiplication table

*Test Data:*

Enter the number:

**(10 Marks)**

### Question Four

- a) Write a C# Sharp program that takes four numbers as input to calculate and print the average. *Test Data:*

Enter the First number:

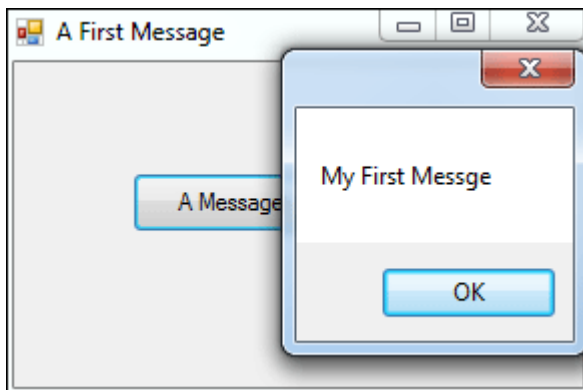
Enter the Second number:

Enter the third number:

Enter the four number:

**(5 Marks)**

- b) Write a code that will achieve the below dialog in C# .NET and improve the same code to display three messages in sequences on the same form Dialog box



(10 Marks)

- c) Spot and proof that the following code has errors, and hence differentiates between Run time errors and syntax errors

```
int age;

age = int.Parse(textBox1.Text);

if (age < 17) {

    MessageBox.Show("Still a youngster.");

}

else if (age >= 16 && age <= 24) {

    MessageBox.Show("Fame beckons!");

}

else if (age >=25 && age < 40 ) {

    MessageBox.Show("There's still time.");

}

else {

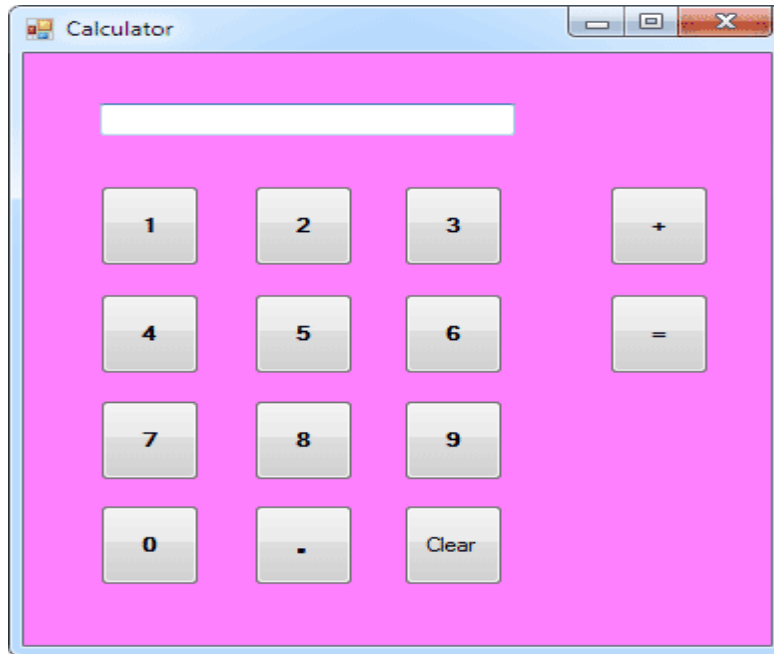
    MessageBox.Show("Oh dear, you've probably missed it!");

}
```

(5 Marks)

### Question Five

- a) Write special codes for each of the buttons found on the below interface of the calculator project **(10 Marks)**



- b) Write a code that will achieve development of a complete web browser window that connects you to any internet platform as illustrated below **(10 Marks)**

