Trent University

Computing and Information Systems 1020H
Winter 2018
Test 1

Instructor: Dr. R.T. Hurley Duration: 55 minutes
Date: February 7, 2018

NAME:_____ **STUDENT#** _____

OPEN BOOK – Course Notes/Textbook Only

In the space provided, answer the following 5 questions. The test is marked out of 20.

1) [5 marks] Answer the following questions either True (T) or False (F):

a) The *do-while* and *for* loops are pre-test loops. _____
b) C# statements are not permitted to span multiple lines. _____
c) Identifier in C# may contain letters, numbers, and any punctations marks. _____
d) int x = (9.0 % 5); would result in x being assigned 4 _____
e) "R" is stored the same as 'R' in C#. _____
f) All *switch* statements require a *default* case. _____
g) The default floating point constant data type is *double*. _____
h) The left hand side of an assignment statement must be a variable. _____
i) Because the || operator performs short-circuit evaluation, your Boolean expression will be evaluated faster if the sub-expression that is most likely to be true is on the left. _____
j) It is not permissible to alter the value of the counter-control variable in a *for* l oop. _____

2) [3 marks] Convert the following *for* loop into a *while* loop.

```
for( int x = 1, int y = 10 ; x < y; x++, y--)
{
    Console.WriteLine("x = {0}, y = {1}", x, y);
}
```

3) [3 marks] Give three different statements in C# that will increase the value of an *int* variable *count* by 1?

4) [4 marks] What is the output of the following program?

```
using System;
public class Simple
{
    public static void Main()
    {
        int x, y;
        x = Convert.ToInt32(Console.ReadLine());
        y = Convert.ToInt32(Console.ReadLine());
        if((2 * x) > y)
            if(y > x)
                Console.WriteLine("Loc 1");
            else if(x < 0)
                Console.WriteLine("Loc 2");
            else
                Console.WriteLine("Loc 3");
        else
            Console.WriteLine("Loc 4");
    }
}
```

Assume the following input is used (program is re-run for each set of input)

a) 3, 4	c) -2, 5
b) 6, 3	d) -1, -3

5) [5 marks] Write a C# to determine the registration fee for automobiles. The program is to input a *year* (int) and *weight* (double), and then compute (and print) a registration fee based on the following table:

Model Year	Weight	Registration Fee
2000 or earlier	less than 1000 kg	$34.50
	greater than or equal to 1000 kg	58.75
Greater than 2000	less than or equal to1500 kg	45.25
	greater than 1500 kg	75.00

Please be sure to validate that the *year* and *weight* are positive (> 0)

```
using System;
public class Question5
{
    public static void Main()
    {

    }
```