CSharp

Answer all questions in just one file named StudentID.txt and submit your assignment on Moodle.

Question 1: What is displayed, and why?

```csharp
using System;

class Test
{
    static void Main()
    {
        int x = 5;
        int y = ++x + x++;

        Console.WriteLine(y);
    }
}
```

Question 2: What is displayed, and why?

```csharp
using System;

class Father
{
    public virtual void doIt(int x)
    {
        Console.WriteLine("Father.doIt(int)");
    }
}

class Son : Father
{
    public override void doIt(int x)
    {
        Console.WriteLine("Son.doIt(int)");
    }

    public void doIt(object o)
    {
        Console.WriteLine("Son.doIt(object)");
    }
}

class Test
{
    static void Main()
    {
        Son d = new Son();
        int i = 10;
        d.doIt(i);
    }
}
```

Question 3: Why does this print "False"?

```csharp
using System;

public class Test
{
    public static void Main()
    {
        double d1 = 1.000001;
        double d2 = 0.000001;
        Console.WriteLine((d1 - d2) == 1.0);
    }
}
```

Question 4: What is displayed, and why?

```csharp
using System;

class Test
{
    static void Main()
    {
        int[] array1 = { 1, 2, 3 };
        int[] array2 = { 1, 2, 3 };

        bool areEqual = array1 == array2;

        Console.WriteLine(areEqual);
    }
}
```

Question 5: The bellow code uses the anonymous method. What does it do?

```csharp
using System;
using System.Collections.Generic;

class Test
{
    delegate void Printer();

    static void Main()
    {
        List<Printer> printers = new List<Printer>();
        for (int i = 0; i < 10; i++)
        {
            printers.Add(delegate { Console.WriteLine(i); });
        }

        foreach (Printer printer in printers)
        {
            printer();
        }
    }
}
```

Question 6: Should this code compile? Does it? What does it mean?

```csharp
using System;

class Test
{
    enum Ooooop { Dog, Cat};
    static void Main()
    {
        Ooooop t = 0.0;
        Console.WriteLine(t);
    }
}
```

Question 7: What is displayed, and why?

```csharp
using System;

class Test
{
    static void Main()
    {
        Foo("Hello");
    }

    static void Foo(object x)
    {
        Console.WriteLine("object");
    }

    static void Foo<T>(params T[] x)
    {
        Console.WriteLine("params T[]");
    }
}
```

Question 8: Explain the result of the code below

```csharp
using System;

class Test
{
    static void Main(string[] args)
    {
        DateTime dateTime = new DateTime(2024, 3, 1);
        Console.WriteLine(dateTime); // Outputs: 3/1/2024 12:00:00 AM

        dateTime.AddHours(24);
        Console.WriteLine(dateTime); // Still outputs: 3/1/2024 12:00:00 AM
    }
}
```