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 <p>प्रज्ञानं ब्रह्म Manipal INSPIRED BY LIFE</p>	<p>MANIPAL INSTITUTE OF TECHNOLOGY (Constituent Institute of Manipal University) MANIPAL-576104</p>	 <p>KNOWLEDGE IS POWER MANIPAL INSTITUTE OF TECHNOLOGY</p>
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VII SEMESTER B.E. (CSE) DEGREE EXAMINATION-2009
SUBJECT: C# AND .NET CONCEPTS(Elective)(CSE 407.5)

TIME : 3 HOURS

MAX.MARKS : 50

Note: (i) Answer **ANY FIVE** full questions.

- 1.(a) Explain CTS and CLS. (4 Marks)
- (b) List the differences between primary module and secondary module. (2 Marks)
- (c) How to reference external assemblies in a C# compiler ? (2 Marks)
- (d) Explain /bugreport flag of a C# compiler. (2 Marks)

2.(a) What is the output of the following program ?

using System;

```
struct A
{
    public int x;
}

class B
{
    public int x;
    public static void Main()
    {
        A a;
        a.x = 100;
        A a2 = a;
        a2.x = 300;
        Console.WriteLine("{0} {1}",a.x,a2.x);
        B b = new B();
        b.x = 100;
        B b2 = b;
        b2.x = 300;
        Console.WriteLine("{0} {1}",b.x,b2.x);
    }
}
```

} (2 Marks)

(b) List the differences between a value type and a reference type. (4 Marks)

(c) List and explain the members of System.Object class. (4 Marks)

3. (a) What is the size of following types in bytes ? (2 Marks)

i. sbyte ii. ushort iii. uint iv. ulong

(b) How to find the minimum and maximum value of the following. (2 Marks)

i. int ii. double

(c) (a) Explain ?: operator, with an example. (2 Marks)

(d) A jagged array has same number of columns as the row number. E.g. Row 2 has 2 columns and Row 3 has 3 columns. Create such a jagged array containing 6 rows, and display it in matrix form. (4 Marks)

4.(a) What are static properties ? Explain with an example. (4 Marks)

(b) A class within a namespace can be directly declared private. True / False (1 Mark)

(c) What do you mean by versioning a class ? Give an example. (3 Marks)

(d) Explain the process of garbage collection in C#. (2 Marks)

5. (a). Explain the IEnumerable interface with an example. (4 Marks)

(b) What are events ? Explain with an example. (3 Marks)

(c) List and explain the contents of an assembly. (3 Marks)

6.(a) Using only System.Text.StringBuilder class, overload the + and – operators for a custom string class. (6 Marks)

(b) Explain fixed and volatile keywords. (4 Marks)
