**Reg. No.**

# MANIPAL INSTITUTE OF TECHNOLOGY
### (Constituent Institute of MANIPAL University)
### MANIPAL-576104

### SEVENTH SEMESTER B.E. (CS&E) DEGREE EXAMINATION-NOV 2009
### Subject:C# Programming and .NET Concepts (CSE 407.5)
### (Revised Credit System)

**TIME : 3 HOUR**                                                **MAX.MARKS : 50**

## Instructions to the Candidates
- Answer ANY FIVE full Questions.
- Missing data can be suitably assumed

1.  a)With a neat diagram, Explain the important building blocks of .NET platform? [4 M]

    b)Differentiate between single and multifile assemblies? [3 M]

    c)Explain the concept of JIT Compiler?[3 M]

2.  a)What are namespaces? List and explain the purpose of atleast five namespace?[3 M]

    b)What is the role of cordbg utility? Explain the steps involved in debugging a source file?[4 M]

    c)List and explain C# "preprocessor" directives?[3 M]

3.  a)Give an anatomy of C# console application program and discuss the variations of main method?[4 M]

    b)Differentiate between value types and reference types with an example?[3 M]

    c)Explain boxing and unboxing with example code?[3 M]

4.  a)Explain all the parameter passing mechanisms in C# with examples?[4 M]

    b)What are the basic components of object oriented programming and how are they implemented in C#? Give the examples?[3 M]

    c)What do you understand by exceptions in C#? Write a C# program to build a custom exception, which raises an exception when the argument passed, is not a palindrome number?[3 M]

5.  a)What are interfaces? In what way are they better as compared to abstract classes? Illustrate with an example the use of interfaces as polymorphic agents?[4 M]

    b)Write a complete C# program to multiply and divide two complex numbers by writing mul and div methods which could be called through the delegate method of programming?[3 M]

    c)What do you understand by event based programming in C#? give an example?[3 M]

6.  Write short notes of the following?

    a)Advanced keywords of C# with example.

    b)Garbage collection in .NET.

    c)Cross Language Inheritance with example.

    d)Operator Overloading with example.