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## P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belgaum)

Fifth Semester, Master of Computer Applications (MCA)

Semester End Examination; Dec - 2016/Jan - 2017

Programming Using C# and .Net

Time: 3 hrs

Max. Marks: 100

**Note:** Answer **FIVE** full questions, selecting **ONE** full question from each unit.

### UNIT - I

- 1 a. Write and explain architecture of .Net framework. 10  
 b. Explain the role of metadata and assemblies in .Net framework. 10  
 2 a. With code example explain boxing and un boxing concepts. 10  
 b. Explain ?? Operator, *is* and *as* Operators with code example. 10

### UNIT - II

- 3 a. Write a program to illustrate the use of different properties in C#. 10  
 b. List the types of parameters passed to a method in C# and explain any two types with example. 10  
 4 a. With suitable example explain static classes and static members. 10  
 b. Explain with code example partial classes and methods in C#. 10

### UNIT - III

- 5 a. Explain compile time polymorphism and run time polymorphism with code example. 10  
 b. What is the need of sealed classes and sealed methods? 10  
 6 a. Explain the delegate type in C# with a programming example. 10  
 b. Define the following keywords with program example, 10  
 i) *try*      ii) *throw*      iii) *catch*      iv) *finally*.

### UNIT - IV

- 7 a. Write a note on how to handle mouse event in C# Program. 10  
 b. Explain Label, TextBox and Button controls usage in windows forms. 10  
 8 a. Demonstrate the creation of Multiple Document Interface windows forms in C#. 10  
 b. Explain the usage of ComboBox control in C#. 10

### UNIT - V

- 9 a. Write and explain Architecture of ADO.net. 10  
 b. In detail explain Dataset of ADO.net. 10  
 10 a. Explain Validation Control of web application with code example. 10  
 b. Write steps to retrieve the data from SQL server. 10