



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

(An Autonomous Institution affiliated to VTU, Belagavi)

Fifth Semester, Master of Computer Applications (MCA)

Semester End Examination; February - 2022

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. Explain any five components of .NET framework. 10
- b. Explain with a neat diagram, for workflow that takes place between your source code, a given .NET compiler and the .NET execution engine. 10
- 2 a. Give an anatomy of C# console application program and describe any five namespaces. 10
- b. Bring out the differences between value types and reference types. 10

UNIT - II

- 3 a. What are the method parameter modifiers? Demonstrate each with suitable function definitions and function calls. 10
- b. What are access modifiers? Explain the different types of access modifiers in C# with suitable example. 10
- 4 a. Explain partial classes and methods with an example program. 10
- b. Discuss the use of Indexers in C# with a code snippet. 10

UNIT - III

- 5 a. What are the pillars of OOP's in C#. Explain "is-a" and "has-a" relationship with respect to inheritance. 10
- b. What is encapsulation? What are two ways of enforcing encapsulation? 10
- 6 a. Write a C# program using try, catch, finally and explain checked and unchecked statements. 10
- b. What is meant by the .NET delegate? Explain in detail steps to create a delegate with simple program. 10

UNIT - IV

- 7 a. Demonstrate labels. Textboxes and buttons controls. 10
- b. Explain checkboxes and Radio button controls. 10
- 8 a. List out properties and their purpose of List box controls. 10
- b. Explain the steps to create Multiple Document Interface (MDI). 10

UNIT - V

- 9 a. List and explain ADO.NET Data providers. 10
- b. Explain the following: 10
 - i) Data adapters
 - ii) Dataset
- 10 a. What is AJAX? Explain the features of AJAX. 10
- b. Explain any five validation controls used in ASP.NET. 10