

B.Sc. Part – III Computer Science (Optional) (Semester – V)

Course Code: DSE-E22 Computer Science Paper –X

Course Title: C# Programming

Total Contact Hours: 36 Hrs (45 Lectures of 48 Min.)

Teaching Scheme: Theory – 03 Lect. / Week

Credits: 02

Total Marks: 50

Course Outcomes:

After successful completion of this course, students will able to:

- 1) understand framework and architecture of .NET.
 - 2) learn common type system of .NET.
 - 3) learn object oriented concepts of C#.net
 - 4) learn graphical user interface (GUI) with windows form controls their properties, methods and events.
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Unit – 1: Introduction to .Net

(18 Hrs.)

An Overview of C#, History and Features of C#, .NET Framework Architecture, IDE – (Integrated Development Environment), Components of .NET: CLR, CLS, Microsoft Intermediate Language ("MSIL" or "IL"), The Common Type System (CTS), Data Types, Value and Reference Types, C# - Flow Control: Branching and Looping, Type casting, Boxing and Unboxing, JIT compiler and it's types, .DLL and .EXE

Unit – 2: Object Oriented Concepts and Windows Form Applications Using C# (18 Hrs.)

Object Oriented Concepts: Classes and Objects, Command Line Arguments, Polymorphism, Inheritance and it's types- Single, Multiple, Multilevel, Hierarchical, Parameter Passing Mechanism – 'val' and 'ref', Abstract Classes, Sealed Classes, Partial Classes, Exception Handling

Introduction to Windows Form Applications Using C#: Developing GUI Application Using WINFORMS - Basic Controls, Form Controls: Label, Button, Textbox, Checkbox, Radio Button, Timer, calendar, List Box, Image and overview of remaining all common controls its properties and events.

Reference Books –

1. C# 4.0 The Complete Reference Schildt Mc Graw Hill
2. Inside C# - By Tom Archer, Andrew Whitechapel (Microsoft Pub)
3. Programming in C#- E Balagurusamy