

# Syllabus

## PANJAB UNIVERSITY

### M.Sc. (IT) -3<sup>rd</sup> Semester

<i>Paper Code</i>	: MS - 32
<i>Paper Title</i>	: .NET FRAMEWORK AND C#
<i>Maximum Marks</i>	: 100
<i>Number of Lectures</i>	: 90 (45 minutes duration)

**Objectives:** This course aims at making a student capable of developing console, windows and web applications using C# on .NET platform.

#### Note:

- i. The Question Paper will consist of Four Units.
- ii. Examiner will set total of NINE questions comprising TWO questions from each Unit and ONE compulsory question of short answer type covering whole syllabi.
- iii. The students are required to attempt ONE question from each Unit and the Compulsory question.
- iv. All questions carry equal marks unless specified.

#### UNIT – I

1. **Introduction to .NET Environment :** The .NET strategy, the origins of the .NET technology, the .NET framework, the common language runtime, framework base classes, user and programs interface, visual studio .NET, .NET languages, benefits of the .NET approach.
2. **Introduction to C# : Introducing C# :** Overview of C#, Literals, Variables, Data Types, Operators, Expressions, Branching, Looping, Methods, Arrays, Strings, Structures, Enumerations , difference between C++ and C#, difference between Java and C#.

#### UNIT – II

3. **Object Oriented Aspects of C# :** Classes, Objects, Inheritance, Polymorphism, Interfaces, Operator Overloading, Delegates, Events, Errors and Exceptions.

4. **I/O and Object Serialization** : I/O: System. I/O, Streams, Text Writer, Text Reader, Binary Writer, Binary Reader, File Stream, File; Serialisation: Binary, SOAP, XML and Custom Serialisation.

### UNIT – III

5. **Writing Windows Forms Applications and Deploying Windows Forms Applications** : Writing Windows Forms Applications: Understanding Windows Forms, Window form controls, Menus, MDI Forms, Using Inheritance in Windows Forms, Using Common Dialog Controls, Deploying Windows Forms Applications: Introduction to deployment, Click Once deployment, Creating an Installation Package for project.
6. **Writing ASP .NET applications and Deploying ASP .NET Applications** : Introduction to ASP.NET, Using Validation Controls, Managing State in ASP.NET Web Applications, Deploying ASP.NET Applications with Windows Installer.

### UNIT – IV

7. **Accessing Data with ADO .NET** : ADO .NET: Architecture, Components, Database, Data Reader, Data Adapter, Data Set, Viewing data using Data Grid View Control, Creating Applications.