

SARDAR PATEL UNIVERSITY
Programme: MCA
Semester: III
Syllabus with effect from: June 2014

Paper Code: PS03CMCA03	Total Credit: 4
Title Of Paper: The .NET Technology	

Unit	Description in detail	Weighting (%)
1	The .NET Technology - I Introduction and evolution, architecture Key design goals and features of the .NET platform Introduction to the .NET framework Common Language Runtime, Common Type System, Common Language Specification, The Base Class Library Common applications of the .NET technology (standalone systems, client-server systems, web-based applications, web services, mobile development, rich client applications, etc.) Program interaction: console applications, Web Forms, Windows Forms, Windows Presentation Foundation, Windows Communication Foundation	
2	The .NET Technology - II Managed code, compilation to intermediate language, Just-In-Time compilation, garbage collection, assemblies and the GAC Multithreading, security, namespaces, automatic boxing and unboxing, generics, collections and iterating over collections, delegates, partial classes, versioning, event-driven programming	
3	Introduction to Programming Using Visual Basic .NET & C# .NET Introduction to the Visual Studio .NET development environment, Syntax, data types, control structures, Basic data types in the .NET framework Class fundamentals, Inheritance, polymorphism, interfaces and delegates Exception handling, Arrays, Lists, Collections and iterating over them	
4	User Interface Development User interface development using Windows Forms Windows Presentation Foundation: major concepts, need for it User interface development using Windows Presentation Foundation	
5	Database Access from .NET Different database access models and their comparison, Managing database connections, Developing data-oriented applications using connected mode, Developing data-oriented applications using disconnected mode, Generating reports	
6	Advanced Features of .NET Multithreading, Internationalization, Remoting and network programming, Custom controls	

Basic Text & Reference Books

- Balena F. : Programming Microsoft Visual Basic .NET, Microsoft Press, 2002.
- Evjen B., et al. : Professional VB 2005 with .NET 3.0, Wrox Publishers, 2007
- Documentation of relevant software packages
- Nagel et al. : Professional C# 2005 with .NET 3.0, Wrox Publishers, 2007

