PartA:Introduction				
Program: Diploma		**Class : UG**	**Year:II year**	**session:2022-2023**
Subject : ComputerApplication				
1.	**CourseCode**	S2-COAP2T		
2.	**CourseTitle**	**Introduction to ASP.NET& C#**		
3.	**Course Type**	**Core course**		
4.	**Pre-requisite**			
5.	**Course LearningOut comes(CLO)**	Onthecompletion ofthis coursestudentwillbeable- • **To learn fundamentals of. net framework** • **To enrich knowledge about Windows Forms, Controls and ASP.NET based applications.** • **To gain proficiency in C# by building stand-alone applications in the .NET framework using C#.** • **To build data-driven applications using the .NET Framework, C#, and ADO.NET** • **To acquire skills to create web-based applications and Reports using.net technologies**		
6.	**CreditValue**	**Theory4**		
7.	**Total Marks**	**Max.Marks:30+70**	**Min.PassingMarks:33**	

PartB:ContentsoftheCourse
Introduction to ASP.NET& C#

TotalNo.ofLectures =60(3 hours/ lecture per week)

Unit	Topics	No. ofLectures
I	Introduction to .NET Framework: Programming Platform .NET Framework, .NET Architecture, CLR, the Just-in-Time Compiler, Garbage collection. .NET Framework class library. C# - The Basics and Console Applications in C#: Introduction to C#.NET Development Environment, Visual development & event driven Programming Methods and events. Data type, type conversion. Variables, constants, operators, Decision making, Loops, Class, Object, Methods. Arrays, String manipulation.	12
II	Overview of OOPs: Encapsulation, inheritance, polymorphism, abstraction. Operator overloading. Creating and using Class Library, Creating User-Defined Classes. Understanding Constructors and instance Variables, Handling and Using Interfaces. Preprocessor directives, Exception handling, Understanding Delegates in c#. Windows Forms and Controls: The Windows Forms Model, Creating Windows Forms Windows Forms Properties and Events, Windows Form Controls, Menus - Dialogs – ToolTips.	12

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III	Introduction to ASP.NET: Overview of ASP.NET framework, Application ASP.NET Life Cycle, page life cycle phases, Initialization, Instantiation of the controls on the page, Restoration and maintenance of the state. Understanding ASP.NET Controls, Applications Web servers, installation of IIS. Web forms, Web form controls ,server controls, client controls, web forms & HTML.	12
IV	Programming in ASP.NET, Adding controls to a web form Buttons, Text Box. Labels, Checkbox. Radio Buttons, List Box etc. States of ASP.NET: View Stale, Control State, Session State, Application State. Creating a multiform web project, running a web Application, Event Handling-Application and Session Events, Page and Control Events. Validation controls: RequiredFieldvalidates, RangeValidator, CompareValidator, RegularExpressionValidator, CustomValidator, ValidationSummary	12
V	Database connectivity in ASP.NET: Architecture of ADO.NET, Connected and Disconnected Database. Create Connection using ADO.NET Object Model, Connection Class, Command Class, Data Adapter Class, and Dataset Class. Display data on data bound Controls and Data Grid. Database Accessing on web applications: Data Binding concept with web, creating data grid, Binding standard web server controls. Display data on web form using Data bound controls.	12
	Part C:Learning Resources	
	SuggestedDigitalPlatforms,Weblinks 1. **https://docs.microsoft.com/en-us/dotnet/framework/get-started/system-requirements** 2. **https://www.c-sharpcorner.com/UploadFile/18585c/overview-of-oops/** 3. **https://www.dotnettricks.com/learn/designpatterns/adapter-design-pattern-dotnet** 4. **http://www.mphindigranthacademy.org/** **SuggestedReadings:** 1. ASP .NET Unleashed C# programming – Wrox Publication. 2. C# Programming Black Book by Matt Talles. 3. VB.NET Programming Black Book by stevenholzner –dreamtech publications 4. Mastering VB.NET by Evangelospetroutsos- BPB publications 5. Introduction to .NET framework-Worx publication 6. Books published by M.P. Hindi Granth Academy, Bhopal	

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Part D-Assessment and Evaluation		
Suggested Continuous Evaluation Methods: Maximum Marks : 100 Continuous Comprehensive Evaluation (CCE) : 30 marks University Exam (UE) : 70marks		
Internal Assessment : Continuous Comprehensive Evaluation (CCE):30	Class Test Assignment/Presentation	Total 30
External Assessment : University Exam Section: 70 Time : 03.00 Hours	**Section(A)** : Objective Questions **Section (B) :** Short Questions **Section (C) :** Long Questions	Total 70

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PartA:Introduction				
Program: Diploma		**Class : UG**	**Year: II year**	**session:2022-2023**
Subject:ComputerApplication				
1.	**CourseCode**	S2-COAP2P		
2.	**CourseTitle**	**Introduction to ASP.NET & C# (Practical)**		
3.	**Course Type**	**Core course**		
4.	**Pre-requisite**	1 year certificate		
5.	**Course LearningOut comes(CLO)**	Onthecompletion ofthis coursestudentwillbeable- • **To learn fundamentals of. net framework** • **To enrich knowledge about Windows Forms, Controls and ASP.NET based applications.** • **To gain proficiency in C# by building stand-alone applications in the .NET framework using C#.** • **To build data-driven applications using the .NET Framework, C#, and ADO.NET** • **To acquire skills to create web-based applications and reports using.NET technologies**		
6.	**CreditValue**	**Practical 2**		
7.	**Total Marks**	**Max.Marks: 30+70**	**Min.PassingMarks: 33**	

PartB:ContentsoftheCourse
Introduction to ASP.NET & C# (Practical)

TotalNo.ofPractical =30 (each of 2 hours duration (1 Practical perweek))

Practical will be conducted based on the theory Syllabus

List of Practicals

1. Write a Program, create a simple console application in C# ,learning of consecrating basic building blocks of a console application.
2. Write a Programfor table lists the differences between Array and ArrayList in C#.
3. Write a Program to combine two arrays without duplicate values in C# using the `Union()` method.
4. Write a Program toremove duplicate values from an array in C# in order to get distinct values.
5. Write a Program to count the total number of elements or some specific elements in the array using an extension method Count() method.
6. Write a Program to get a comma-separated string from an array using String.Join() method.
7. Write a Program to sort a one-dimensional array in two ways using Array.Sort() method and LINQ query.
8. Write a Program to table lists , differentiate between Array and ArrayList in C#.

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9. Write a Program to obtain two numbers from the user and display thembut reject any input where both numbers are greater than 10 and ask for two new numbers.
10. Write a console application toobtain fourint values from the user and display the product.
11. Write an application that receives the following information from a set of students: Student Id: Student Name: Course Name: Date of Birth: The application should also display the information of all the students once the data has been entered. Implement this using an Array of Structures.
12. Write programs using conditional statements and loops: Generate Fibonacci series.
13. Write programs using conditional statements and loops: Generate various patterns (triangles, diamond and other patterns) with numbers.
14. Write programs using conditional statements and loops: Test for prime numbers.
15. Write a program using function overloading to swap two integer numbers and swap two float numbers.
16. Write a program to declare a class "staff" having data of the memberssuch as name and post. Accept this data 5for atheist for 5 staff members and displaythe names of "staff" who are HOD.
17. Define a class, having "salary" ofmembersdisplaying variables such as Basic, DA, HRA. Write a program using Constructor with default values for DA and HRA and calculate the salary of employees.
18. Create a project that computes the total of fat, carbohydrate and protein. Allow the user to enter into the text boxes,the grams of fat, grams of carbohydrate and grams of protein assumingthat each gram of fat is 9 calories and protein / carbohydrate is 4 calories. Display the total calories of the food item in a label. Use other labels to display the accumulated sum of calories and the count of items entered. The food form should have 3 text boxes for the user to enter the grams of each category.Include labels next to each text box indicating what the user has entered.
19. Design the same webpages for BMS, BAF and UG students and apply the same background color for all the pages using css.

	Part C:Learning Resources	
	SuggestedDigitalPlatforms,Weblinks 1. **https://docs.microsoft.com/en-us/dotnet/framework/get-started/system-requirements** 2. **https://www.c-sharpcorner.com/UploadFile/18585c/overview-of-oops/** 3. **https://www.dotnettricks.com/learn/designpatterns/adapter-design-pattern-dotnet** 4. **https://www.dbit.ac.in/mca/syllabus/asp.net-lab.pdf** 5. http://www.mphindigranthacademy.org/	

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	SuggestedReadings: 1. ASP .NET Unleashed C# programming – Wrox Publication. 2. C# Programming Black Book by Matt Talles. 3. VB.NET Programming Black Book by stevenholzner –dreamtech publications 4. Mastering VB.NET by Evangelospetroutsos- BPB publications 5. Introduction to .NET framework-Worx publication 6. Books published by M.P. Hindi Granth Academy, Bhopal	

Part D-Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Internal Assessment	Marks	External Assessment	Marks
Class Interaction /Quiz		Viva Voce on Practical	
Attendance		Practical Record File	
Assignments (Charts/ Model Seminar / Rural Service/ Technology Dissemination/ Report of Excursion/ Lab Visits/ Survey / Industrial visit)		Table work / Experiments	
TOTAL	30		70

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