**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BENGALURU - 27**

Registration Number:

Date & Session

**BSc COMPUTER SCIENCE - VI SEMESTER**

**SEMESTER EXAMINATION: APRIL 2024**

**(Examination conducted in May / June 2024)**

**CS 6123 – INTERNET TECHNOLOGIES AND C#**

**(For current batch students only)**

**Time: 2 Hours Max Marks: 60**

**This paper contains TWO printed pages and THREE parts**

**PART-A**

Answer **ALL** the following questions: (2 x 5 = 10)

1. Explain Write() and WriteLine() methods with examples.
2. What are output parameters? Explain with an example.
3. How does one method override another method in a class? Explain.
4. What is purpose of using finally block in Exceptions?
5. Explain any two ASP.NET web form controls.

**PART – B**

Answer any **FIVE** of the following questions: (4 x 5 = 20)

1. How virtual method is used to achieve dynamic binding in C#? Provide a program demonstrating this concept.
2. How are interfaces defined, extended, and implemented in C#? Support your explanation with an example.
3. Write a C# program to Handle Multiple catch Statements.
4. What is a multicast delegate in C#? Illustrate its usage with a program calculating the area and perimeter of a rectangle.
5. Explain Garbage Collection in detail.
6. What are the major differences between classic ADO and ADO.NET?
7. Write a program in C# to find the sum of the digits of a number.

**PART – C**

Answer any **THREE** of the following: (3 x 10 = 30)

1. Write a C# program to read data and determine following using arrays
   1. Total marks and average obtained by each student
   2. The highest marks in each subject and roll number of a student
   3. The student who got highest total marks
   4. Rank/grade
2. a. Does C# support multiple inheritances? Justify your answer with an example.

b. Explain the scope of variables used in C# with a programming example. (5+5)

1. a. Write a program to create user registration form in one ASP.NET web page and display filled data in another page.

b. Distinguish between Static and Instance constructors in C#. (7+3)

1. a. With a clear visual representation, describe the structure and components of the .NET Framework.

b. Analyze the behavior and application of sealed classes in C#, providing a concrete code example. (7+3)