Topic: Programming in C sharp

Total Marks : 25

Section A: Conceptual Questions

(Answer any 2 questions. Each question carries 2 marks.)

1. **What is a variable in C#?**
2. **Explain the difference between an `int` and a `double` in C#.**
3. **`What is the purpose of the `if` statement in C#?**
4. **What is a method in C#? Give an example of how to create a simple method.**

Section B: Application Questions

(Answer any 1 question. This question carries 6 marks.)

1. **Write a simple C# program that asks the user for their age and then displays a message saying whether they are a teenager (age 13-19) or not.**
2. **Write a C# program that creates an array of 5 integers and prints each value to the console.**

Section C: Analysis and Understanding Questions

(Answer any 1 question. This question carries 4 marks.)

1. **What does the `Console.ReadLine()` method do in C#?**
2. **What will the following code output? Explain why.**

   int x = 5;

   int y = 10;

   int result = x + y;

   Console.WriteLine(result);

Section D: Skill Development / Case Study

(Answer 1 question. This question carries 6 marks.)

1. **Case Study: Calculator Program**
   Write a simple C# program that acts like a basic calculator. The program should:
   - Ask the user to input two numbers.
   - Then, ask the user to choose an operation: addition, subtraction, multiplication, or division.
   - The program should then calculate and display the result.
2. **Hint**: Use `if` or `switch` statements to choose the operation.