| Branch/Semester | B.Tech CSE (AI & ML) / Semester I |
|---|---|
| **Subject Name:** | Computer Programming |
| **Subject Code:** | 01CE2101 |
| **Assignment:** | Practice Questions (Function) |
| **Date:** | 27th September 2025 |
| **Faculty Name:** | Prof. Abhishek Chauhan |

| Sr. | Question | CO | BL |
|---|---|---|---|
| 1 | Write a program to define and declare a simple function greet() that prints "Hello, World!". | CO3 | BL1 |
| 2 | Explain with a program how a function is declared and defined in C. Print the sum of two integers. | CO3 | BL2 |
| 3 | Write a program using a function to calculate the square of a number (call by value). | CO3 | BL3 |
| 4 | Demonstrate call by reference with a program that swaps two numbers using pointers. | CO3 | BL3 |
| 5 | Write a program that demonstrates the difference between call by value and call by reference for swapping numbers. | CO3 | BL4 |
| 6 | Implement a recursive function to calculate factorial of a number. | CO3 | BL3 |
| 7 | Write a recursive function to compute the nth Fibonacci number. | CO3 | BL3 |
| 8 | Analyze the performance of factorial calculation using recursion vs iteration. | CO3 | BL4 |
| 9 | Write a program with a recursive function to reverse a given string. | CO3 | BL3 |
| 10 | Write a function that accepts an array of integers and returns the maximum element. | CO3 | BL3 |
| 11 | Compare the advantages of using recursion over iteration with examples. | CO3 | BL5 |
| 12 | Write a recursive function to compute GCD (Greatest Common Divisor) of two numbers. | CO3 | BL2 |
| 13 | Create a program that demonstrates nested function calls (a function calling another function). | CO3 | BL6 |
| 14 | Design a recursive function to solve the Tower of Hanoi problem. | CO3 | BL6 |

| 15 | Develop a menu-driven program that allows the user to choose between iterative and recursive approaches for a problem (like factorial or Fibonacci). | CO2 | BL6 |