

**Programming Fundamentals Lab Exam**

**Marks: 100**

**Name:** \_\_\_\_\_

**Roll No:** \_\_\_\_\_

**Professor:** *Imran Javed*

**Marks Obtained:** \_\_\_\_\_

1. What is an array, and how is it different from a normal variable in C? (5)
  
  
  
  
  
  
  
  
  
  
2. What will happen if you try to access an array element beyond its size? (5)
  
  
  
  
  
  
  
  
  
  
3. How can you pass an array to a function in C? (5)
  
  
  
  
  
  
  
  
  
  
4. What is pointer arithmetic, and how does it work? (10)
  
  
  
  
  
  
  
  
  
  
5. What is the difference between `int *ptr` and `int **ptr`? (5)

6. How do you dynamically allocate memory for an integer array of size 10 in C? (10)

7. What is the purpose of the typedef keyword when used with structures? (5)

8. What is the difference between a while loop and a do-while loop? (10)

9. How can you exit from a loop prematurely in C? (5)

10. What is the base case in recursion? (5)

11. How can you prevent infinite recursion? (5)
12. What is the difference between direct and indirect recursion? (10)
13. write a program to swap two variables without using third variable (20)