1. Define recursion. Write a program to find the sum of first N natural numbers using a recursive function.
2. What are the advantages of using function? Explain function declaration, call and definition with the help of an example.
3. Discuss call by value and call by reference using examples. Why it is recommended to pass structures and arrays using Pass by address?
4. Write a recursive solution for the tower of Hanoi.
5. Write a program to calculate the factorial of a given number using recursion.
6. What do you mean by recursion? Write a C program to print the Fibonacci series using recursion.
7. Explain the concept of call-by-value and call-by-reference with a suitable example.
8. What is recursion? Write a program which calculates factorial for a given number using a recursive function.
9. Explain the concept of Binary search. Also implement this technique to search a particular number in a given array.
10. What do you mean by formal and actual arguments.
11. Write a C program that defines a function “Myrecfact” that takes one argument from the user and returns the factorial of the given number using the concept of recursion.
12. Define functions. Explain how the control flows in case of a function call. Also give the use of return statement in a function call.
13. What is the problem of Towers of Hanoi? Explain with example in C.
14. What is recursion? Explain with example.
15. Explain with suitable example call-by-value and call-by-reference advantages and disadvantages.
16. Explain any three categories of functions.(In terms of arguments and return value)
17. Write a program to calculate factorial and power for x^i / x! using recursion.
18. Explain the concept of call-by-value and call=by-reference with an example.
19. What will be output of the following:

```
int test(int a) {
        int b = 10;
        a=2;
        a=a*b;
        return a;
}
int main() {
        int a = 100;
        int b = 500;
        a = test(b);
        printf(“\n %d %d”, a, b);
        return 0;
}
```

20. What are the advantages of using function? Explain function declaration, function call, and function definition with examples.

21. Write a program to input a 4x4 matrix by the user. Test and print whether the matrix is symmetric or not?
22. Write a recursive function to print the first n terms of the following fibonacci series. The value of n will be entered by the user:
    1 1 2 3 5 6 13 ……
23. Discuss call-by-value and call-by-reference using example with its advantages and disadvantages.
24. What do you mean by function prototype? Explain with suitable example.
25. Differentiate between call-by-value and call-by-reference with the help of example.
26. What is recursion? Write a C program which evaluates factorial for a given number using recursive function.
27. Define recursion. Write a program to find the sum of first n number by using recursive function.
28. Define function and its types.
29. Write the difference between call-by-value and call-by-reference.
30. Explain with example how a function can return more than one value by using pointer.
31. Explain with suitable example the concept of call-by-value and call-by-reference and differentiate between them.
32. What are the advantages of function? Explain function declaration, function call and function definition with example.
33. Write a recursive function to find factorial of a number.