B.TECH. CSE SEMESTER – II

2020

WORKSHEET-III

1. What is the difference between call by value and call by reference? Explain with the help of a program for swapping the two numbers.
2. Explain with the help of suitable examples the break and continue statements in C language.
3. What is the difference between recursion and iteration?
4. Write a C program to keep calculate the sum of the digits of a number until the number is a single digit. For example: Input=2018, Process: 2018=>2+0+1+8=11, now 11=> 1+1=2. So Output=2.
5. Write recursive functions to -
    - Find the factorial of a given number.
    - Find GCD.
    - Generate the Fibonacci series up to n terms.
    - Find the sum of first n integers.
6. WAP to find sum of following series-
    - **1 + 1/2 + 1/3 + 1/4 + .. + 1/n**
    - **(1/a + 2/a^2 + 3/a^3 + … + n/a^n)**
    - **(1*1) + (2*2) + (3*3) + (4*4) + (5*5) + … + (n*n)**
    - **1/1! + 2/2! + 3/3! + 4/4! +…….+ n/n!**
    - **1^4 + 3^4 + 5^4 + ……+ 100 terms**
7. WAP that accepts marks of five subjects and finds percentage and prints grades according to the following criteria:

    Between 90-100% Print A

    80-89% ---------- Print B

    60-79% ---------- Print C

    Below 59% ----- Print D
8. Write a program that tells whether a given year is a leap year or not.
9. WAP to find the reverse of a given number.
10. Write a program to find whether a given number is Armstrong number or not?
11. WAP to convert Binary number into Decimal number.
12. WAP to convert Decimal number into Binary number.
13. WAP which accepts a number and display it in words. (Example: Input->123;Output->One Two Three)

14. Write the output of below program:

```c
#include <stdio.h>
int funfoe(int n)
{
    if (n == 4)
       return n;
    else
        return 2*funfoe(n+1);
}
int main()
{
   printf("%d ", funfoe(2));
   return 0;
}
```

15. Write the output of below program:

```c
#include <stdio.h>
int funfoet(int x, int y)
{
  if (x == 0)
    return y;
  return
    funfoet(x - 1,  x + y);
}
int main()
{
   printf("%d ", funfoet(3,3));
   return 0;
}
```