ASSIGNMENT 4 – PSEUDOCODE

Q1. Write pseudocode to calculate factorial of a number.

```
FUNCTION fact(n)
        If n=0 or n=1
            RETURN 1
        Else
            RETURN n*fact(n-1)  //recursive
        END if
END function
```

```
FUNCTION fact(n)
        fact=1
        for i in 1 to n  //iterative
            fact*=i
        END for
        RETURN fact
END function
```

Q2. Write pseudocode to print even numbers from 1 to 20.

```
FUNCTION even_num()
        For i in 1 to 20
            If i mod =0
                PRINT i
            End if
        END for
END function
```

Q3. Trace logic to sum even numbers between 1 and 5.

Logic:

1) Even numbers between 1 and 5 : 2 and 4
2) Initialize sum= 0
3) Process each number between 1 and 5
    i. 1 mod 2= 1 then skip
    ii. 2 mod 2 =0 add (sum+2=0+2 =2)
    iii. 3 mod 2 =1 then skip
    iv. 4 mod 2 = 0 add (sum+4 = 2+4 =6)
    v. 5 mod 2 =1 then skip

Pseudocode:

```
Sum=0
For i in 1 to 5
    If i mod 2 =0
        Sum= sum +i
    End if
END for
Print  sum
```