**DAA – ASSIGNMENT**

1) Write an algorithm for Fibonacci series using Recursion. Design the recurrence relation and solve it.

2) Solve the following

i) X(n) = X(n-1) + 5 , ∀n>1, X(1) = 0

ii) X(n) = 3X(n-1) , ∀n>1, X(1) = 4

iii) X(n) = X(n-1) + n , ∀n>0, X(0) = 0

iv) X(n) = X(n/2) + n, ∀n>1, X(1) = 1 (Solve for n = 2k)

v) X(n) = X(n/3) + 1, ∀n>1, X(1) = 1 (Solve for n = 3k)

3) Write an algorithm for Selection sort and Bubble sort. Analyze its time complexity.