**C++ Assignments : Stack – 1 ANS**

Q1) .You have two stack and 1,2,3,4,5 values and you have pushed all these values to S1 (in the order

1,2,3,4,5) and then you took 2 elements from top and inserted into S2 , then pop 1 element from S1

and then take top of S2 and insert into S1. What is the second top element in S1.

Ans : [2]

Q3) What does this function do ?

Ans : 2. Prints binary representation of n

Q3) Which of the following statement(s) about stack data structure is/are NOT correct?

Ans : 3) Stack is the FIFO data structure

4) Adding an element to a filled stack leads to underflow condition.

Q2)

#include<iostream>

#include<stack>

using namespace std ;

void print(stack<int>& st){

    stack<int> temp ;

        while(st.size()>0){

        int x = st.top();

        temp.push(st.top());

        st.pop();

 }

    while(temp.size()>0){

       st.push(temp.top());

        cout<<temp.top()<<" ";

        temp.pop();

    }

    cout<<endl;

}

void pushAtBottom(stack<int>& st ,int val){

    stack<int> temp ;

      while(st.size()>0){

        int x = st.top();

        temp.push(st.top());

         st.pop();

         }

         st.push(val);

         while(temp.size()>0){

            st.push(temp.top());

            temp.pop();

         }

}

void pushAtIdx(stack<int>& st ,int idx){

    stack<int> temp ;

      while(st.size()>idx){

        temp.push(st.top());

         st.pop();

         }

         st.pop();

         while(temp.size()>0){

            st.push(temp.top());

            temp.pop();

         }

}

int main(){

     stack<int> st ;

    st.push(10);

    st.push(20);

    st.push(30);

    st.push(40);

    st.push(50);

    print(st);

    cout<<endl;

    pushAtBottom(st,80);

    print(st);

    pushAtIdx(st,2);

    print(st);

}

Output :

