Answer FIVE Questions Only

NOTE: 10 marks for each question

Q1: Write c++ program to read an integer number and find if it Prime or not by using function?

Q2: Write complete c++ program to read any string and count how many upper characters (caps) in the string, and convert it to lower characters (small)?

Q3: Write c++ program to find S from the following series:

\[ S = 1 + x + (2y+x^2/2!) + (3y+x^3/3!) + \ldots (a*y+x^3/a!) \]

Q4: Write a C++ program, using structure type, to read name and phone number and birthday, and include (year, month, day), for 10 persons and print only the person that birthday equal (1994, 1, 1)?

Q5: Write c++ program to read 4*4 array and swap the main diagonal elements with second diagonal elements and print the result?

Q6: Find the output for the following program:

1- #include <iostream.h>
int abc(int a, int *b, int *c)
{
    a = (*b) && (*c) && (*b)? *b = *=c + a; b = 3 + a;
    a = 4;
    return (*b);
}
main()
{ int x = 2, y = 2, z = 2;
    cout << abc(x, &y, &z) << " " << x << " " << z;
}

2- # include <iostream.h>
void main ()
{ int a [3][3] = {{1, 2, 3}, {4, 5, 6}, {7, 8, 9}};
    int t;
    for (int i = 0; i < 3; i++)
    { t = a [1][i];
        a [1][i] = a [i][2];
        a [i][2] = t;
    }
    for (int i = 0; i < 3; i++)
    { for (int j = 0; j < 3; j++)
        cout << a [i][j];
        cout << endl;
    }
}