



Note: Answer all questions, 10 marks for each question.

Q1. Write a class to define a stack of integer numbers, represent the two main functions pop and push by a two overloaded operator, - and +.

Q2. Write overloaded versions of a Max function which compares two integers, two real, or two strings, and returns the 'larger' one.

Q3.a. How can we initialize a constant members in a class? give an example.
Q3.b. What's the difference between public, private, and protected declaration?

Q4. Write a class to define a computer with the following information:

RAM size, price, processor speed, computer model.

Write two constructor function, the first one read this information from the user, the second one accept the input for these information as a parameter. Then write a global function to print this information, with a main function to test this class definition.

Q5. Trace the following program and find out the output of the program.

```
class CVector {
public:
    int x,y;
    CVector () {}
    CVector (int,int);
    CVector operator + (CVector);
};

CVector::CVector (int a, int b) {
    x = a;
    y = b;
}

CVector CVector::operator+ (CVector param) {
    CVector temp;
    temp.x = x + param.x;
    temp.y = y + param.y;
    return (temp);
}

int main () {
    CVector a (3,1);
    CVector b (1,2);
    cout<<a.x<<" "<<a.y;
    cout<<b.x<<" "<<b.y;
    CVector c;
    c = a + b;
    cout << c.x << " " << c.y;
    return 0;
}
```

Good Luck