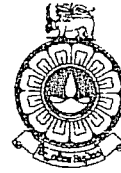THE OPEN UNIVERSITY OF SRI LANKA
B.Sc DEGREE PROGRAM: LEVEL 05
CLOSED BOOK TEST 2007/2008
CSU 3279 – OBJECT ORIENTED PROGRAMMING
DURATION: ONE AND HALF HOURS

Date: 06/11/2007

Time: 4.00 pm – 5.30 pm

Answer All Questions.

Q1). State whether the following statements are **TRUE or FALSE.**

a). The sign flag is '0' for positive numbers.
b). In the context of C++, the prefixed increment operator (++x) and the post fixed increment operator (x++) gives the same meaning.
c). In the context of C++ the IF-Else statement and the conditional operator can be used for the same task.
d). When creating an array to store a string using C++ programming language, the array should consist with one space more than the number of characters of the string.
e). *Extern* variables and *auto* variables perform the same role.
f). Function overloading doesn't allow different functions to have the same name.
g). A selector method is a read only method.
h). Protected members are similar to public members.
i). Constructor of a class should consist with the same name of the class.
j). Private data in two classes can be accessed without using a friend function.

Q2). i). What would be the outputs of following two program segments.

a). # include < iostream.h >

```
void main ( )
{

char *c;
char * const strg = "abcd";
cout<<" String is " << strg <<'\n';
        c = strg + 1;
        *c = 'X';
cout<<" String is " << strg <<'\n';

}
```

b).
```cpp
# include < iostream.h >
void swap ( int &a, int &b )
{
    int temp;
    temp = a;
    a = b;
    b = temp;
}
void main ( )
{
    int x = 3, y = 5;
    swap (x,y)
    cout<< " X = " << x << '\n';
    cout<< " Y = " << y ;
}
```

ii). What are the storage classes. Describe each of them briefly.

iii). Define a structure template to store a students' name and the date of birth as date, month and the year.

iv). Write down a C++ program to input "01" and "Object Oriented Programming" and display them using a structure template and reference notation.

Q3) i). Define a class to represent student information. Include following members.
Data members
  i). Index number of the student.
  ii). Name of the student.
  iii). Marks obtained for the subject.

Member functions
  i). A default constructor.
  ii). A destructor.
  iii). A user defined constructor to initialize data members of the class.
  iv). A function to check whether the student obtained marks greater than 35. If the student has scored greater than 35 there should be a message "You are pass ". Otherwise the message " Try again".

Write a main program to test your class.