COMSATS Institute of Information Technology (CIIT)
Islamabad Campus
Object Oriented Programming
Final Exam. BCS-2. Fall 2010

Instructor: Dr. Zia-ud-Din   Total Marks: 50   Allocated Time: 3 hours

Note: Attempt all questions.

Question 1.   What is a constructor? Why do we use them? Write a code example containing a couple of overloaded constructors. (2+2+6=10)

Question 2.   See the code below.

```
void main()
{
        parent * p1 = new parent;
        parent * p2 = new child;
        p1->fxn();
        p2->fxn();
};
```

When we run the above code (assuming that the relevant classes are there), it displays the following output:

I am parent function.
I am parent function.

Without changing the main, write parent and child classes along with the function fxn (no need to write any constructors/destructor) such that the displayed output is changed to: (6)

I am parent function.
I am child function.

Question 3.   Name all the access modifiers used in C++. How each of them affects the access to class members? (2+3=5)

Question 4.   What is exception handling? What are the keywords used to implement exception handling in C++? Write a complete code example to elaborate your answer. (2+2+6=10)

Question 5.   What is the only technical difference between a class and a structure? (3)

Question 6.   See the code below.

```
class room
{
        float length, width;
    public:
        float area(){return length*width;}
};
```

Overload > operator for the above class. Also show that how you will use that operator in your main function. (4+2=6)

Question 7.   This question is based on your semester project. Write the title of your project, your project partners' names and names of the classes you used in your project along with their relationships. The actual grading for this question will consider your overall performance in the semester project including fulfillment of timing constraints, your presentation, demo and response to oral questions during the presentation. (10)

********************************** Good Luck **********************************