

MIDTERM EXAMINATION SPRING 2007 CS304 - OBJECT ORIENTED PROGRAMMING (Session - 4)		Marks: 40 Time: 90min
StudentID/LoginID:	<input type="text"/>	
Student Name:	<input type="text"/>	
Center Name/Code:	<input type="text"/>	
Exam Date:	Thursday, May 03, 2007	
<p>Please read the following instructions carefully before attempting any of the questions:</p> <ol style="list-style-type: none">1. Attempt all questions. Marks are written adjacent to each question.2. Do not ask any questions about the contents of this examination from anyone.<ol style="list-style-type: none">a. If you think that there is something wrong with any of the questions, attempt it to the best of your understanding.b. If you believe that some essential piece of information is missing, make an appropriate assumption and use it to solve the problem.c. Write all steps, missing steps may lead to deduction of marks.d. All coding questions should be answered using the C ++ syntax.3. You are not allowed to use IDE (Dev-C++ or any) in your paper.4. This paper is closed handouts. <p>**WARNING: Please note that Virtual University takes serious note of unfair means. Anyone found involved in cheating will get an `F` grade in this course.</p>		

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Question Marks	1	2	3	4	5	6	7	8	9	10	Total

Question No: 1 (Marks: 1) - Please choose one

The main function of scope resolution operator (::) is,

- ▶ To define an object
- ▶ To define a data member
- ▶ To link the definition of an identifier to its declaration
- ▶ All of the given

Question No: 2 (Marks: 1) - Please choose one

What is a class?

- ▶ A class is a section of computer memory containing objects.
- ▶ A class is a section of the hard disk reserved for object oriented programs
- ▶ A class is the part of an object that contains the variables.
- ▶ A class is a description of a kind of object.

Question No: 3 (Marks: 1) - Please choose one

Which of the following features of OOP is used to derive a class from another?

- ▶ Encapsulation
- ▶ Polymorphism
- ▶ Data hiding

- ▶ Inheritance

Question No: 4 (Marks: 1) - Please choose one

Which of the following is an advantage of **OOP**?

- ▶ OOP makes it easy to re-use the code
- ▶ It provides an ability to create one user defined data type by extending the other
- ▶ It provides the facility of defining Abstract data types through which real world entities can be defined better
- ▶ All of the given options

Question No: 5 (Marks: 1) - Please choose one

Objects having identical characteristics belong to

- ▶ Same class
- ▶ Two different classes
- ▶ Any number of different classes
- ▶ Objects can not have identical characteristics

Question No: 6 (Marks: 5)

Write any two advantage(s) of declaring a member function as const?

Question No: 7 (Marks: 10)

Write the code for Deep copy constructor for the given class.

```
class MidTerm
{
```

```
private:
char* papername;
int Totalmarks;

// Code for Deep copy constructor

};
```

Question No: 8 (Marks: 18)

Write a program which consists of a class named **Zakat** and consists of two data members **OwnerName** and **Totalamount**, the class should also consists of three constructors i.e. Default constructor , one argument constructor and two argument constructor.

The class should further consists of a member function named **Cal_zakat ()** which calculate the zakat.

It should be keep in mind that the zakat will be calculated only if the **Totalamount** is greater than or equal to 20,000.

In main, define three object of this class for respective constructors and also display the zakat for each object.

Note: The zakat will be calculated by the formula $(\text{Totalamount} * 2.5)/100$;

Question No: 9 (Marks: 1) - Please choose one

At the most, how many instances of certain class can be created?

- ▶ 1
- ▶ 6
- ▶ 3
- ▶ none of these

Question No: 10 (Marks: 1) - Please choose one

```
class A
{
public:
    virtual void MyVirtualMethod() = 0;
};
```

```
class B : public A
{
public:
    void MyVirtualMethod()
    {
        //do something
    }
};
```

Considering the given code, which of the following statements is correct?

- ▶ Class B is a an abstract class
- ▶ Class A is a concrete class
- ▶ Object of class A can not be instantiated
- ▶ Class B is a child class of class A