FINAL TERM EXAMINATION
SPRING 2010
CS304- OBJECT ORIENTED PROGRAMMING

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

Classes like TwoDimensionalShape and ThreeDimensionalShape would normally be concrete, while classes like Sphere and Cube would normally be abstract.

- ► True
- ► **False**

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

Each try block can have _____ no. of catch blocks.

- ► 1
- ► 2
- ► 3
- ► **As many as necessary.**

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

Function templates should be used where code and behavior must be identical.

- ► True
- ► **False**

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

Consider the following statement

Cupboard has books

What is the relationship between Cupboard and books?

- ► Composition
- ► **Aggregation**
- ► Inheritance
- ► None of the given options

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

Identify the correct way of declaring an object of user defined template class **A** for char type members?

- ► A< char > obj;
- ► <char>A obj;
- ► A obj<char>;

► Obj <char> A;

Question No: 6 (Marks: 1) - Please choose one

The user must define the operation of the copy constructor.

► **True**

► False

Question No: 7 (Marks: 1) - Please choose one

Default constructor is such constructor which either has no ---------or if it has some parameters these have -------- values

► Parameter, temporary

► Null, Parameter

► **Parameter, default**

► non of the given

Question No: 8 (Marks: 1) - Please choose one

The type that is used to declare a reference or pointer is called its ---------

► default type

► **static type**

► abstract type

► reference type

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

How the information hidden within an object can be accessed?

► Through its interface

► Through its private data members

► **Through its private member functions**

► Through both public and private members

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

The sub-object's life is not dependant on the life of master class in _____.

► Separation

► Composition

► **Aggregation**

► None of the given

Question No: 11 (Marks: 1) - Please choose one

Encapsulation means

Select correct option:

►Extending the behaviour of class in another class

►**Data and behaviour are tightly coupled within an entity**

►One entity takes all the attributes and operations of the other

►Taking out the common features and put those in a separate class

Question No: 12 (Marks: 1) - Please choose one

Algorithms can only be implemented using STL containers.

► True

► **False**

Question No: 13 (Marks: 1) - Please choose one

When we write a class template the first line must be:

► template < class *class_name*>

► template < class *data_type*>

► **template < class T >**

Here T can be replaced with any name but it is preferable.

► class class-name()

class template<*class_name*>

Question No: 14 (Marks: 1) - Please choose one

An STL container can not be used to,

► **hold objects of class employee.**

► store elements in a way that makes them quickly accessible.

► compile c++ programs.

► organize the way objects are stored in memory

Question No: 15 (Marks: 1) - Please choose one

_____, which means if A declares B as its friend it does NOT mean that A can access private data of B. It only means that B can access all data of A.

► **Friendship is one way only**

► Friendship is two way only

► NO Friendship between classes

► Any kind of friendship

Question No: 16 (Marks: 1) - Please choose one

Which of the following may not be an integral part of an object?

► State

► Behavior

► **Protected data members**

► All of given

Question No: 17 (Marks: 1) - Please choose one

Public methods of base class can --------- be accessed in its derived class

► **directly**

► inderectly

► simultaniously

► non of the given

Question No: 18 (Marks: 1) - Please choose one

If a class D has been derived using protected inheritance from class B (If B is a protected base and D is derived class) then public and protected members of B ------- accessed by member functions and friends of class D and classes derived from D

► **can be**

► cannot be

► does restirct to be

► not given

Question No: 19 (Marks: 1) - Please choose one

What is true about function templates?

► The compiler generates only one copy of the function template

► **The compiler generates a copy of function respective to each type of data**

► The compiler can only generate copy for the int type data

► None of the given.

Question No: 20 (Marks: 1) - Please choose one

Which of the following is an integral part of an object?

► State

► Behavior

► Unique identity

► **All of the given**

Question No: 21 (Marks: 1) - Please choose one

When the base class and the derived class have a member function with the

same name, you must be more specific which function you want to call (using _____).

- ► scope resolution operator
- ► **dot operator**
- ► null operator
- ► Operator overloading

Question No: 22 (Marks: 2)

Describe the way to declare a template function as a friend of any class.

Question No: 23 (Marks: 2)

Explain two benefits of **constructor.**

Question No: 24 (Marks: 2)

Can a constructor throws an exception. How to handle error when the constructor fails?

Question No: 25 (Marks: 2)

Write the code for a function template

Question No: 26 (Marks: 3)

Write three advantages of Iterator.

Question No: 27 (Marks: 3)

What is the difference between Virtual and Multiple Inheritance?

Question No: 28 (Marks: 5)

What is random_iterator? What is relation between random_iterator and Vector?

Question No: 29 (Marks: 5)

The code given below has one template function as a friend of a template class,

1. You have to identify any error/s in this code and describe the reason for error/s.
2. Give the correct code after removing the error/s.

```
template<typename U>
void Test(U);
template< class T >

class B{
```

```
        int data;
        public:
        friend void Test<>( T );
};

template<typename U>
void Test(U u){
    B < int> b1;
    b1.data = 7;
    }
int main(int argc, char *argv[])
{
    char i;
    Test(i);
    system("PAUSE");
    return 0;
}
```