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# 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**
- ▶ indirectly
- ▶ simultaneously
- ▶ 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 restrict 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;  
}
```

