CS304

FINAL TERM

VU SPARKY

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1. In order to define a class template the first line of definition must be:
   a. Class <Template T>
   b. template <typename T> ✓SPARKY
   c. Template Class <ClassName>
   d. typename <template T>
2. Which will be the Primary task or tasks of generic programming?
   a. Categorize the abstractions in a domain into concepts
   b. Implement generic algorithms based on the concepts
   c. All of given ✓SPARKY
   d. Build concrete models of the concepts
3. Which of the following is correct way to define a template class X?
   a. class< typename T > class X { };
   b. template< typename T > class X { }; ✓SPARKY
   c. typename <class T > class X { };
   d. template class X { };

4. Consider the following class "phone" which is inheriting from "Transmit" and "Receiver". Which of the following line of code will produce error.

```
Class phone: public Transmit, public Receiver
{ };
int main()
{
phone obj;
Tranmit* obj1 = &obj;
Received obj2 = &obj;
}
```

   a. 3rd and 4th line will produce error.
   b. 5th line will produce error ✓ *SPARKY*
   c. 4th line will produce error
   d. 3rd line will produce error

5. The parameters given in template definition other than those used for mentioning templates types are called _____.
   a. Type Parameters

b. Default Type Parameters
c. Non-Type Parameters✓SPARKY
d. None of the given options

6. Which of the following is known as Dereference operator in C++?
   a. &
   b. ::
   c. +
   d. *✓SPARKY

7. In C++ generic programming is done using_____
   a. Procedures
   b. Templates✓SPARKY
   c. None of given
   d. Packages

8. When we want to have exactly identical operations on different data types, _____ are used.
   a. None of the given options
   b. Function Overriding
   c. Function Overloading
   d. Function Templates✓SPARKY

9. We can change behavior of a template using _____.
   a. Function Templates
   b. None of the given options
   c. Template Parameters ✓*SPARKY*
   d. Class Templates
10. In statement "template <class T, class U, int I = 5>" ,the non-type parameter is _____.
   a. int I ✓*SPARKY*
   b. class U
   c. class T
   d. All of the given options

d. Inequality Operator: !=

In C++, which of the following keywords works only with constructors?

a. static

b. const

c. explicit

d. virtual

_____ represents “IS A” relationship.

a. Composition

b. Simple Association

c. Inheritance

d. Aggregation

A Child class can call constructor of its parent class through,

a. Its constructor body

b. Both from its constructor initialization list or body

c. Can not call the constructor of its parent class

d. Its constructor initialization list

Friend Functions of a class are _____ members of that class.

a. Private

b. Protected

c. None of the given options.

d. Public

In Public Inheritance the public members of base class become _____ in derived class.

a. Public

b. Protected

c. None of the given options.

d. Private

Which of the following is TRUE,

a. Base class pointer can be used as Derived class pointer

b. Both of these options

c. Derived class pointer can be used as Base class pointer

d. None of these options

Choose the correct option to declare an overloaded stream insertion operator for a user-defined class "String" as a non-member friend function.

a. friend ostream & operator << (ostream & os, const String & s);

b. friend ostream & operator << ();

c. friend void operator << (const String & rhs);

d. friend void & operator << (ostream & os);

If we have not given any constructor for the class, compiler generates which of the following constructors?

a. Implicit Parameterized Constructor

b. Explicit Default Constructor

c. Explicit Parameterized Constructor

d. Implicit Default Constructor

We can have _____ type of member functions in a class.

a. Public

b. All of these options

c. Private

d. Protected

In Dev C++, the compiler builds a _____ for each class having virtual functions.

a. vTable

b. Global Table

c. Symbol Table

d. Page Table

In Dev C++, _____ keeps track of the virtual functions and calls them correctly according to the nature of the object for which they are being called.

a. Query Analyzer

b. Debugger

c. Compiler

d. Interpreter

In inheritance, polymorphism is done by _____.

a. None of the given options

b. Copy Constructor

c. Method Overloading

d. Method Overriding

What will be the output of the following program?

```
#include<iostream>
using namespace std;

class House{
private:
int rooms;

public:
House() { cout<<"Entering the house"<<endl;}
```

```
House(int R) { rooms = R;}
~House() { cout<<"Leaving the house"<<endl;}
};
class Kitchen : public House
{ double size;
public:
Kitchen() : House() { cout<<"Entering the kitchen";}
};

int main()
{
Kitchen Obj;
return 0;
}
```

a. Entering the house

Leaving the house

Entering the kitchen

b. Entering the kitchen

Entering the house

Leaving the house

c. Leaving the house

Entering the house

Entering the kitchen

d. Entering the house

Entering the kitchen

Leaving the house

For the given class definition, which one is correct?

```
#include<iostream>
using namespace std;
class A{
int x,y;
```

```
public:
int Add(int a,int b){return a+b;}
int Add(int c){return c;}
};
```

a. Function Add is overloaded

b. Function Add has an error

c. None of the given options

d. Function Add is overridden

```
class   A { ----};
class   B  :  private   A {----};
class  C : public  B : private   A {----};
```

Which of the above class hierarchy declaration will generate a compile error?

a. class C : public B : private   A

b. class   A

c. none of the given options

d. class   B : private   A

What is the name of Base class in the line below?

class Truck : public Vehicle

a. Truck

b. Vehicle

c. Public

d. None of the given options

Virtual functions can be used in _____ ways.

a. 2

b. 8

c. 6

d.0

The mechanism of selecting function at run time according to the nature of calling object is called _____.

a. virtual binding

b. dynamic binding

c. hybrid binding

d. static binding

What will be the output of the following program?

```
#include<iostream>
using namespace std;
class FirstNumber
{ private:
      int  x;
public:
      int y;
FirstNumber () { x = 0; y = 10; }
};
class SecondNumber: public FirstNumber
{   int z;
   public:
       int w;
SecondNumber () : FirstNumber ()
{
       z = 20;
      w =  y + z;
     cout<<w;}
```

```
};
int main()
{
SecondNumber Obj;
return 0;
}
```

a. 40

b. 30

c. 10

d. 20

A template argument is preceded by the keyword _____.

a. vector

b. type*

c. class

d. template HB03147094561

In private inheritance derived class pointer can be assigned to base class pointer in,

a. In base class member and friend functions

b. Main function

c. In derived class member and friend functions

d. None of the given options

_____ binding means that target function for a call is selected at compile time.

a. Dynamic

b. Automatic

c. None of given options

d. Static HB03147094561

Consider the following class "phone" which is inheriting from "Transmit" and "Receiver". Which of the following line of code will produce error.

Class phone: public Transmit, public Receiver

{ };

```
1. int main()
2. {
3. phone obj;
4. Tranmit* obj1 = &obj;
5. Received obj2 = &obj;
6. }
```

a. 3rd and 4th line will produce error.

b. 3rd line will produce error

c. 4th line will produce error

d. 5th line will produce error

When we want to have exactly identical operations on different data types, _____ are used.

a. None of the given options

b. Function Templates

c. Function Overriding

d. Function Overloading

Which will be the Primary task or tasks of generic programming?

a. All of given

b. Implement generic algorithms based on the concepts

c. Categorize the abstractions in a domain into concepts

d. Build concrete models of the concepts

_____ class is a single class that provides functionality to operate on different types of data.

a. Ordinary

b. Friend

c. Template

d. None of the given options

Consider the code given below,


```
Class base{
Public:
int i;
};
Class derived1: private base{};
Class derived2: public derived1 {};
```

Then int member i of base class is accessible in class,

a. none of the given options

b. derived2 only

c. derived1 only

d. both derived1 and derived2

Which of the following function can convert a class into an abstract class?

a. Abstract function

b. Pure virtual function HB03147094561

c. Virtual function

d. Concrete function

_____ binding means that target function for a call is selected at run time.

a. Dynamic HB03147094561

b. Automatic

c. Constant

d. Static

In OOP, static data members of a class are called _____ variables.

a. Object

b. Function

c. Class @studywithhamzza25

d. Structure

Which of the following stores the address of a variable?

a. Pointer @studywithhamzza25

b. Function

c. Destructor

d. Constructor

Which of the following function declaration is correct to overload the + operator as member function in Complex class?

a. Complex +(const Complex & rhs);

b. operator + Complex (const Complex & rhs);

c. Complex operator + ::(const Complex & rhs);

d. Complex operator +(const Complex & rhs);
@studywithhamza25

Which of the following statement is TRUE about a class's Static Member Function?

a. It can access constant data members of the class.

b. It can access non-static data members.

c. It is used to access static data members only.
@studywithhamza25

d. It can only be called by a particular object of class.

We can get the address of a variable stored in a pointer using _____:

a. ->symbol

b. & symbol @studywithhamza25

c. * symbol

d. :: symbol

Suppose we have a class named "Test" and void show() is one of its public member function. Which of the following is a correct way to call show() function using Test pointer ptr?

a. ptr.show();

b. ptr->show(); @studywithhamza25

c. ptr:show();

d. ptr::show();

Static Data Members can be accessed through _____.

a. Semi colon

b. Scope resolution operator @studywithhamza25

c. Dot operator and scope resolution operator

d. Dot operator

In composition _____ are called from composed objects to composing objects.

a. Constructors

b. Pointers

c. Variables

d. Destructors @studywithhamza25

Suppose we have a class named "Student"; which of the following statement is correctly declaring the pointer to the object for "Student" class?

a. Student*obj; @studywithhamza25

b. Student obj;

c. Student &obj;

d. *Student obj;

_____ remain in memory even when all objects of a class have been destroyed.

a. Instance Data Members

b. Static Data Members @studywithhamza25

c. Primitive Variables

d. Constant Data Members

Static Data Members can be accessed through _____.

a. Dot operator and scope resolution operator @studywithhamza25

b. Scope resolution operator

c. Semi colon

d. Dot operator

Which of the following best describes relationship between Book and BookChapter classes?

a. Association

b. Aggregation

c. Inheritance

d. Composition @studywithhamza25

Suppose we have a class named "Student"; which of the following statement is correctly declaring the pointer to the object for "Student" class?

a. Student obj;

b. Student &obj;

c. Student * obj; @studywithhamza25

d. * obj;

In composition _____ are called from composed objects to composing objects.

a. Variables

b. Pointers

c. Destructors

d. Constructors @studywithhamza25

Which of the following is the correct way of declaring a constant variable named RollNo?

a. const int RollNo;

b. const RollNo;

c. int RollNo const;

d. int const rollNo; @studywithhamza25

_____ is creating objects of one class inside another class.

a. Inheritance

b. Composition @studywithhamza25

c. Aggregation

d. Association

We can get the address of a variable stored in a pointer using _____

a. @studywithhamza25 symbol

b. :: symbol

c. & symbol @studywithhamza25

d. ->symbol

We can access a private static data member of a class through _____.

a. Static member function @studywithhamza25

b. Global member function

c. Global data member

d. Static data member

Suppose we have a class named "Test" and void show() is one of its public member function. Which of the following is a correct way to call show() function using Test pointer ptr?

a. ptr->show(); @studywithhamza25

b. ptr:show();

c. ptr::show();

d. ptr.show();

Identify which of the following overloaded operator function's declaration is appropriate for the given call?

Rational_number_1 + 2.325

Where Rational_number_1 is an object of user defined class Rational_number.

a. Rational_number operator+(Rational_number &obj, double& num); @studywithhamza25

b. operator+(double& obj);

c. None of the given choices

d. Rational_number operator+(Rational_number & obj);