

# VIRTUAL UNIVERSITY OF PAKISTAN

A Good Education is a Foundation For a Better Future  
CORRECT ANSWER SOLVED BY HADI  
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## (Final Term Past Paper)

(Made by Waqar & Solved By Hadi)

**WARNING:** Team HADI is not responsible for any mistake or wrong answer. All students reading and using this document may check and confirm the answers at their own.



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Best of luck!



Question No : 1 of 52

Marks: 1 (Budgeted Time 1 Min)

Which of the following is the best approach to implement generic algorithms with minimum number of coding lines?

Answer ( Please select your correct option )

Templates

Overloading

Overriding

Friend function/class



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Question No : 2 of 52

Marks: 1 (Budgeted Time 1 Min)

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

Answer ( Please select your correct option )

A < char > obj;

<char>A obj;

A obj<char>;

Obj <char> A;



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Question No : 3 of 52

Marks: 1 (Budgeted Time 1 Min)

In order to define a class template, the first line of definition must be:

Answer ( Please select your correct option )

- `template <typename T>`
- `typename <template T>`
- `Template Class <ClassName>`
- `Class <Template T>`



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Question No : 4 of 52

Marks: 1 (Budgeted Time 1 Min)

A copy constructor is invoked when

Answer ( Please select your correct option )

- a function do not returns by value.
- an argument is passed by value.
- a function returns by reference.
- an argument is passed by reference.



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Question No : 5 of 52

Marks: 1 (Budgeted Time 1 Min)

Considering the resolution order in which compiler search for functions in a program; the first priority is given to,

Answer ( Please select your correct option )

- general template
- partial specialization
- complete specialization
- ordinary function



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Question No : 5 of 52

Marks: 1 (Budgeted Time 1 Min)

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- complete specialization
- ordinary function



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Question No : 7 of 52

Marks: 1 (Budgeted Time 1 Min)

Inheritance is a way to

Answer ( Please select your correct option )

- organize data.
- pass arguments to objects of classes.
- add features to existing classes without rewriting them.
- improve data-hiding and encapsulation.



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Question No : 8 of 52

Marks: 1 (Budgeted Time 1 Min)

In \_\_\_\_\_, a base class can be replaced by its derived class,

Answer ( Please select your correct option )

Sub-typing

Super-typing

Multiple-typing

Restricted-typing



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Question No : 9 of 52

Marks: 1 (Budgeted Time 1 Min)

Which of the following is the way to extract common behaviour and attributes from the given classes and make a separate class of those common behaviours and attributes?

Answer (Please select your correct option )

Generalization

Sub-typing

Specialization

Extension



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Question No : 10 of 52

Marks: 1 (Budgeted Time 1 Min)

Which is true about specialization in case of inheritance?

Answer ( Please select your correct option )

- In specialization derived class has some restricted behavior of its own.
- In specialization derived class shows some extended behavior of its parent.
- In specialization derived class should be abstract.
- In specialization, derived class is behaviourally compatible with base class



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Question No : 11 of 52

Marks: 1 (Budgeted Time 1 Min)

The function that is automatically called when an object of a class is created is named as \_\_\_\_\_.

Answer ( Please select your correct option )

Constructor

Destructor

Member Functions

Inline Functions



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Question No : 12 of 52

Marks: 1 (Budgeted Time 1 Min)

Which of the following is used to free the memory space allocated as a result of object declaration?

Answer ( Please select your correct option )

- Constructor
- New operator
- Destructor
- Accessor Function



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Question No : 13 of 52

Marks: 1 (Budgeted Time 1 Min)

A class can be identified from a statement by -----

Answer (Please select your correct option )

Noun

Pronoun

Verb

Adverb



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Question No : 14 of 52

Marks: 1 (Budgeted Time 1 Min)

Public methods of base class can be \_\_\_\_\_ accessed in the derived class.

Answer ( Please select your correct option )

Directly

Indirectly

Consecutively

Simultaneously



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Question No : 15 of 52

Marks: 1 (Budgeted Time 1 Min)

The type that is used to declare a reference or pointer is called its \_\_\_\_\_.

Answer ( Please select your correct option )

- default type
- static type
- abstract type
- reference type



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Question No : 16 of 52

Marks: 1 (Budgeted Time 1 Min)

The operations of copy constructor must define by:

Answer ( Please select your correct option )

- System
- User
- System and User
- Administrator



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Question No : 17 of 52

Marks: 1 (Budgeted Time 1 Min)

All the \_\_\_\_\_ members of base class can be accessed from the derived class.

Answer ( Please select your correct option )

- Private
- Protected
- Non private
- Public



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Question No : 18 of 52

Marks: 1 (Budgeted Time 1 Min)

A non virtual member function in base class is overridden in derived class; if that non virtual function is called through base class pointer to derived class object, then the \_\_\_\_\_ version is used.

Answer ( Please select your correct option )

- Derived class
- Abstract class
- Base class
- Concrete class



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Question No : 19 of 52

Marks: 1 (Budgeted Time 1 Min)

Multiple inheritance can be of type

Answer ( Please select your correct option )

- Public, Private
- Private, Protected
- Protected, Public
- Public, Protected, Private



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Question No : 20 of 52

Marks: 1 (Budgeted Time 1 Min)

A template argument is preceded by the keyword \_\_\_\_\_.

Answer ( Please select your correct option )

vector, class

typename, class

template, class

type, class



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Question No : 21 of 52

Marks: 1 (Budgeted Time 1 Min)

Consider the following statements:

- 1) `int iArray[5];`
- 2) `int *pArr = iArray;`

Answer ( Please select your correct option )

Error in first statement

Error in second statement

Error in both statements

No error in both statements



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Question No : 22 of 52

Marks: 1 (Budgeted Time 1 Min)

Which one of the following is example of complete specialization,

Answer ( Please select your correct option )

- `template <typename T> class Vector { };`
- `template <typename T> class Vector<T*> { };`
- `template<> class Vector <char*> { };`
- `template <class T> class Vector< T *> { };`



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Question No : 23 of 52

Marks: 1 (Budgeted Time 1 Min)

Non Template Friend functions of a class are friends of \_\_\_\_\_instance/s of that class.

Answer ( Please select your correct option )

- One
- Two
- All instances of one date type
- All



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Question No : 24 of 52

Marks: 1 (Budgeted Time 1 Min)

Template functions use \_\_\_\_\_ than ordinary functions.

Answer ( Please select your correct option )

- More Memory
- Less Memory
- Same Memory
- Different Memory



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Question No : 25 of 52

Marks: 1 (Budgeted Time 1 Min)

By default the vector data items are initialized to \_\_\_\_\_.

Answer ( Please select your correct option )

0

1

2

4



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Question No : 26 of 52

Marks: 1 (Budgeted Time 1 Min)

Two important STL associative containers are \_\_\_\_\_ and \_\_\_\_\_ .

Answer ( Please select your correct option )

set,map

sequence,mapping

setmet,multipule

sit,mat



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Question No : 27 of 52

Marks: 1 (Budgeted Time 1 Min)

A vector is an appropriate container if you

.

Answer ( Please select your correct option )

- want to insert lots of new elements at arbitrary locations in the vector.
- want to insert new elements, but always at the front of the container.
- are given an index number in order to quickly access the corresponding element.
- are given an element key value in order to quickly access the corresponding element.



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Question No : 28 of 52

Marks: 1 (Budgeted Time 1 Min)

An STL container can not be used to:

Answer ( Please select your correct option )

- 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



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Question No : 29 of 52

Marks: 1 (Budgeted Time 1 Min)

The copy() algorithm returns an iterator to

Answer ( Please select your correct option )

- the last element copied from.
- the last element copied to.
- the element one past the last element copied from.
- the element one past the last element copied to.



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Question No : 30 of 52

Marks: 1 (Budgeted Time 1 Min)

\_\_\_\_\_ follow try block to catch the thrown object.

Answer ( Please select your correct option )

Catch block

Throw block

Main block

Try block



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Question No : 31 of 52

Marks: 1 (Budgeted Time 1 Min)

We can initialize the constant data members of a class without using the assignment operator through:

Answer ( Please select your correct option )

- Const data members
- Static data members
- Constructor
- Member initialization list



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Question No : 32 of 52

Marks: 1 (Budgeted Time 1 Min)

In order to reuse the characteristics of more than one parent class, we must use:

Answer ( Please select your correct option )

- Inheritance
- Protected inheritance
- Multiple inheritance
- Private inheritance



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Question No : 33 of 52

Marks: 1 (Budgeted Time 1 Min)

A virtual function is a function that is expected to redefine in \_\_\_\_\_ class.

Answer ( Please select your correct option )

- Base class
- Parent class
- Super class
- Derived class



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Question No : 34 of 52

Marks: 1 (Budgeted Time 1 Min)

In abnormal termination our program is terminated \_\_\_\_\_.

Answer ( Please select your correct option )

Manually

Normally

Abnormally

Routinely



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Question No : 35 of 52

Marks: 1 (Budgeted Time 1 Min)

Default constructor either has no \_\_\_\_\_ or parameters with \_\_\_\_\_ values.

Answer ( Please select your correct option )

Parameters, temporary

Parameters, null

Parameters, default

Parameters, zero



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Question No : 36 of 52

Marks: 1 (Budgeted Time 1 Min)

Which is not the Advantage of inheritance?

Answer ( Please select your correct option )

- facilitating class libraries.
- avoiding the rewriting of code.
- providing a useful conceptual framework.
- providing class growth through natural selection.



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Question No : 37 of 52

Marks: 1 (Budgeted Time 1 Min)

A pointer to a base class can point to object of a \_\_\_\_\_ class.

Answer ( Please select your correct option )

Base

Derived

Abstract

Virtual



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Question No : 38 of 52

Marks: 1 (Budgeted Time 1 Min)

A template provides a convenient way to make a family of:

Answer ( Please select your correct option )

- variables and data members
- functions and classes
- classes and exceptions
- programs and algorithms



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Question No : 39 of 52

Marks: 1 (Budgeted Time 1 Min)

The specialization pattern <T\*> after the name says that this specialization is to be used for every,

Answer ( Please select your correct option )

- data type
- meta type
- virtual type
- pointer type



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Question No : 40 of 52

Marks: 1 (Budgeted Time 1 Min)

Each try block can have \_\_\_\_\_ no. of catch blocks.

Answer ( Please select your correct option )

2



3



As many as necessary.



1



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Question No : 41 of 52

Marks: 2 (Budgeted Time 4 Min)

How can we set the default values for NON type parameters?

Answer ( [Please click here to Add Answer](#) )



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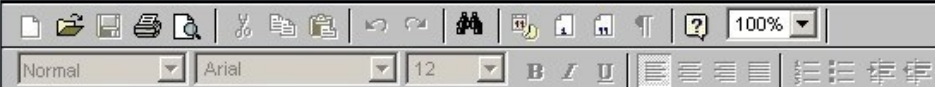
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Question No : 42 of 52

Marks: 2 (Budgeted Time 4 Min)

Can we achieve Information Hiding by separating Interface and Implementation of an object? Justify your answer.

Answer ( [Please click here to Add Answer](#) )



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In which situations we should use **Operator Overloading** and in which situations we should use **Templates**.

Answer ( [Please click here to Add Answer](#) )



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Question No : 44 of 52

Marks: 2 (Budgeted Time 4 Min)

Describe two key components of STL?

Answer ( [Please click here to Add Answer](#) )



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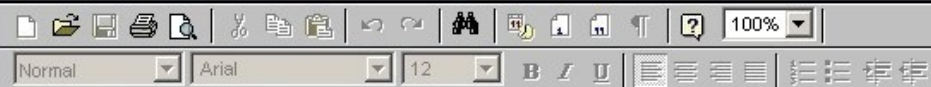
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Question No : 45 of 52

Marks: 3 (Budgeted Time 6 Min)

If we declare a function as friend of a template class will it be a friend for a particular data type or for all data types of that class.

Answer ( [Please click here to Add Answer](#) )



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Question No : 46 of 52

Marks: 3 (Budgeted Time 6 Min)

Tell the two ways to indicate the compiler that we are overloading post increment operator.

Answer ( [Please click here to Add Answer](#) )



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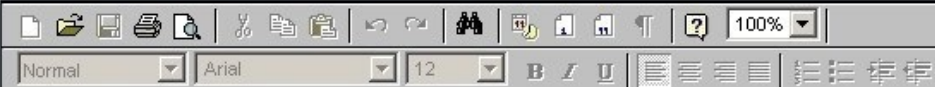
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Question No : 47 of 52

Marks: 3 (Budgeted Time 6 Min)

In which situation do we need to implement virtual inheritance? Explain with the help of an example.

Answer ( [Please click here to Add Answer](#) )



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Question No : 48 of 52

Marks: 3 (Budgeted Time 6 Min)

Give the general syntax of nested try catch blocks?

Answer ( [Please click here to Add Answer](#) )



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Question No : 49 of 52

Marks: 5 (Budgeted Time 10 Min)

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);
```

Answer ( Please [click here](#) to Add Answer )



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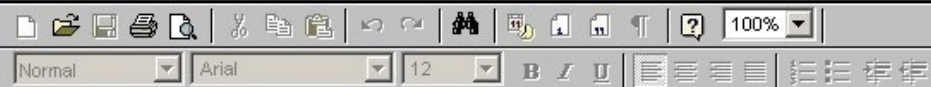
Question No : 50 of 52

Marks: 5 (Budgeted Time 10 Min)

Consider the following code segment:

```
class Complex{  
private:  
double real, img;  
public:
```

Answer ( Please [click here](#) to Add Answer )



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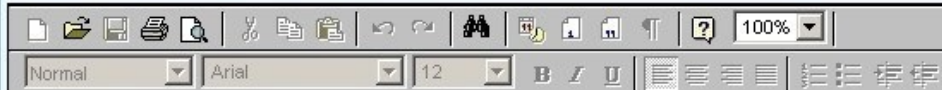
Question No : 51 of 52

Marks: 5 (Budgeted Time 10 Min)

Consider the following code segment:

```
class Alphabets {  
public:  
virtual void write()=0;  
};
```

Answer ( Please [click here](#) to Add Answer )



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Question No : 52 of 52

Marks: 5 (Budgeted Time 10 Min)

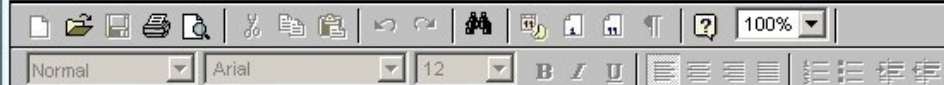
What is the output produced by the following program?

```
#include <iostream.h>
```

```
void sample_function(double test) throw (int);
```

```
int main()
```

Answer ( [Please click here to Add Answer](#) )



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Question No : 52 of 52

Marks: 5 (Budgeted Time 10 Min)

```
(  
    try  
    (  
        cout << "Trying \n";  
        sample_function(98.6);  
        cout << "Trying after call \n";
```

Answer ( Please [click here](#) to Add Answer )



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Question No : 52 of 52

Marks: 5 (Budgeted Time 10 Min)

```
        cout << "Catching after catch\n";  
    }  
    catch(int)  
    {  
        cout << "Catching\n";  
    }  
}
```

Answer ( [Please click here to Add Answer](#) )



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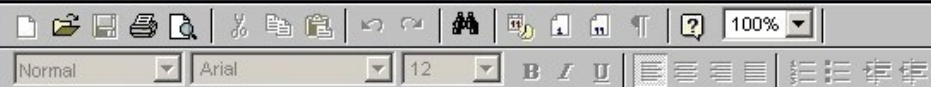
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Question No : 52 of 52

Marks: 5 (Budgeted Time 10 Min)

```
    cout << "End program.\n";  
    return 0;  
}  
void sample_function(double test) throw (int)  
{  
    cout << "Starting sample_function.\n";
```

Answer ( Please [click here](#) to Add Answer )



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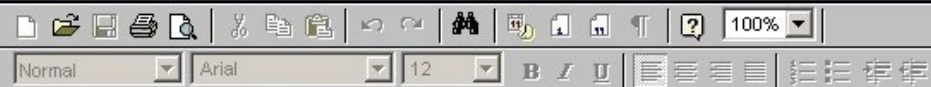
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Question No : 52 of 52

Marks: 5 (Budgeted Time 10 Min)

```
void sample_function(double test) throw (int)
{
    cout << "Starting sample_function.\n";
    if(test < 100)
        throw 42;
}
```

Answer ( Please [click here](#) to Add Answer )



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