



Virtual University

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CS304
Solved Final Terms Papers

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Year
2017

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

In the Name of Allāh, the Most Gracious, the Most Merciful

Paper Pattern

MCQS 40 each 1 mark
Short 4 each 2 marks
Short 4 each 3 marks
long 4 each 5 marks

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)

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- ☒ Templates ✓
- ☐ Overloading
- ☐ Overriding
- ☐ Friend function/class

Made by: Waqar Siddhu

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)

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- ☒ A< char > obj; ✓
- ☐ <char>A obj;
- ☐ A obj<char>;
- ☐ Obj <char> A;

Made by: Waqar Siddhu

Question No : 3 of 52

Marks: 1 (Budgeted Time 1 Min)

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 _____).

Answer (Please select your correct option)

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☐ scope resolution operator

☐ dot operator

☐ null operator

☒ Operator overloading

Made by: Waqar Siddhu

Question No : 4 of 52

Marks: 1 (Budgeted Time 1 Min)

An abstract class is useful when,

Answer (Please select your correct option)

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☐ We do not derive any class from it.

☐ There are multiple paths from one derived class to another.

☐ We do not want to instantiate its object.

☒ You want to defer the declaration of the class.

Made by: Waqar Siddhu

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)

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☐ general template

☐ partial specialization

☐ complete specialization

☒ ordinary function

Made by: Waqar Siddhu

Question No : 6 of 52

Marks: 1 (Budgeted Time 1 Min)

Three main characteristics of "Object Oriented programming" are,

Answer (Please select your correct option)

☐ encapsulation, dynamic binding, polymorphism

☐ polymorphism, overloading, overriding

☐ encapsulation, inheritance, dynamic binding

☒ encapsulation, inheritance, polymorphism

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Made by: Waqar Siddhu

Question No : 7 of 52

Marks: 1 (Budgeted Time 1 Min)

A private member or variable is not accessible to:

Answer (Please select your correct option)

☐ Base class

☒ Derived class

☐ Abstract class

☐ virtual class

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Question No : 8 of 52

Marks: 1 (Budgeted Time 1 Min)

A non virtual member function ding() in base and derived class, and pointer p to base class object contains the address of derived class object, then the statement p->ding() will execute ding() member function in _____ class.

Answer (Please select your correct option)

☒ Base

☐ Derived

☐ Abstract

☐ virtual

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Question No : 9 of 52

Marks: 1 (Budgeted Time 1 Min)

A virtual member function `ding()` in base and derived class, and pointer `p` to base class object contains the address of derived class object, then the statement `p->ding()` will execute `ding()` member function in _____ class.

Answer (Please select your correct option)

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Base

☐

Derived

☒

Virtual

☐

Implemented

☐

Made by: Waqar Siddhu

Question No : 10 of 52

Marks: 1 (Budgeted Time 1 Min)

By default, which access level is assigned to members of a class?

Answer (Please select your correct option)

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Public

☐

Private

☒

Local

☐

Protected

☐

Made by: Waqar Siddhu

Question No : 11 of 52

Marks: 1 (Budgeted Time 1 Min)

Which of the following can be the instance of class Vehicle?

Answer (Please select your correct option)

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Car, Computer, Desk

☐

Ahmad, Bicycle, Truck

☐

Computer, Truck, Ahmad

☐

Car, Bicycle, Truck

☒

Made by: Waqar Siddhu

Question No : 12 of 52

Marks: 1 (Budgeted Time 1 Min)

In OOP's, advantage of inheritance include all of the given below except,

Answer (Please select your correct option)

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- ☐ Provide a useful conceptual framework
- ☐ Reusing the code
- ☐ Dealing with real world entities
- ☒ Decrease maintainability

Made by: Waqar Siddhu

Question No : 13 of 52

Marks: 1 (Budgeted Time 1 Min)

What would be the output of following code?

```
class dummy
{
    private:
        int data;
```

Answer (Please select your correct option)

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- ☐ Compile-time error
- ☐ Output is 0
- ☐ Run-time error
- ☒ Output will be a garbage value

Made by: Waqar Siddhu

Question No : 14 of 52

Marks: 1 (Budgeted Time 1 Min)

Which will be the good example of a method that is shared by all instances of a class?

Answer (Please select your correct option)

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- ☐ Virtual method
- ☐ Overloaded method
- ☐ Constant method
- ☒ Static method

Made by: Waqar Siddhu

Question No : 15 of 52

Marks: 1 (Budgeted Time 1 Min)

If you do not initialize static variable of int type then it is automatically initialized with _____.

Answer (Please select your correct option)

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☒ 0

☐ 1

☐ -1

☐ Null

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Question No : 16 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)

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☒ Directly

☐ Indirectly

☐ Consecutively

☐ Simultaneously

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Question No : 17 of 52

Marks: 1 (Budgeted Time 1 Min)

Which members are lies somewhere between public and private members?

Answer (Please select your correct option)

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☒ Protected members

☐ Global members

☐ Static members

☐ Friends members

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Question No : 18 of 52

Marks: 1 (Budgeted Time 1 Min)

The operations of copy constructor must define by:

Answer (Please select your correct option)

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☐ System

☒ User

☐ System and User

☐ Administrator

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Question No : 19 of 52

Marks: 1 (Budgeted Time 1 Min)

A base class member or method that is alternatively defined in derived class is known as _____.

Answer (Please select your correct option)

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☐ Overloaded

☐ Copy riding

☐ Overwriting

☒ Overriding

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Question No : 20 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)

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☐ Private

☐ Protected

☐ Non private

☒ Public

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Question No : 21 of 52

Marks: 1 (Budgeted Time 1 Min)

When a virtual function is called by referencing a specific object by name and using the dot member selection operator (e.g., squareObject.draw()), the reference is resolved at _____.

Answer (Please select your correct option)

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Run time

☒

Compile time

☐

Processing time

☐

Execution time

☐

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Question No : 22 of 52

Marks: 1 (Budgeted Time 1 Min)

Which of the following causes a compile time error?

Answer (Please select your correct option)

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Declaring object of a concrete class in the definition of main function

☐

Writing output statement in constructor's definition

☐

Declaring object of a class having atleast one pure virtual function

☒

Declaring object of a class having all virtual functions

☐

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Question No : 23 of 52

Marks: 1 (Budgeted Time 1 Min)

Multiple inheritance can be of type

Answer (Please select your correct option)

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Public, Private

☐

Private, Protected

☐

Protected, Public

☐

Public, Protected, Private

☒

Made by: Waqar Siddhu

Question No : 24 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)

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☐ Error in first statement

☐ Error in second statement

☐ Error in both statements

☒ No error in both statements

Made by: Waqar Siddhu

Question No : 25 of 52

Marks: 1 (Budgeted Time 1 Min)

```
template<> class Vector<void*> {  
    void** p;  
    //...  
    void*& operator[] ((int i);  
};
```

Answer (Please select your correct option)

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☐ This specialization can be used as the common implementation for all Vectors of pointers.

☐ This specialization can then be used as the implementation for all types of classes.

☐ This specialization can then be used for double type pointers.

☐ This specialization should be used for Vectors of int types.

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Question No : 26 of 52

Marks: 1 (Budgeted Time 1 Min)

Which of the following is NOT an advantage of generic programming?

Answer (Please select your correct option)

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☐ Reusability

☐ Writability

☐ Maintainability

☒ Efficient memory usage

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Question No : 27 of 52

Marks: 1 (Budgeted Time 1 Min)

Which one of the following is example of complete specialization,

Answer (Please select your correct option)

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☐ `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 : 28 of 52

Marks: 1 (Budgeted Time 1 Min)

Template functions use _____ than ordinary functions.

Answer (Please select your correct option)

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☐ More Memory

☒ Less Memory

☐ Same Memory

☐ Different Memory

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Question No : 29 of 52

Marks: 1 (Budgeted Time 1 Min)

An STL algorithm is

Answer (Please select your correct option)

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☒ A standalone function that operates on containers.

☐ A link between member functions and containers.

☐ A friend function of appropriate container classes.

☐ A member function of appropriate container classes.

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Question No : 30 of 52

Marks: 1 (Budgeted Time 1 Min)

A vector is an appropriate container if you

Answer (Please select your correct option)

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☐

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 : 31 of 52

Marks: 1 (Budgeted Time 1 Min)

The find() algorithm

Answer (Please select your correct option)

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☐

Finds matching sequences of elements in two containers.

☐

Finds a container that matches a specified container.

☒

Takes iterators as its first two arguments.

☐

Takes container elements as its first two arguments.

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Question No : 32 of 52

Marks: 1 (Budgeted Time 1 Min)

A range is often supplied to an algorithm by two _____ values.

Answer (Please select your correct option)

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☐

italic

☒

iteration

☐

iterator

☐

container

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Question No : 33 of 52

Marks: 1 (Budgeted Time 1 Min)

Which of the following is Not an example of error handling techniques?

Answer (Please select your correct option)

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☐ Abnormal Termination

☐ Graceful Termination

☐ Return the illegal value

☒ Returning a value

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Question No : 34 of 52

Marks: 1 (Budgeted Time 1 Min)

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

Answer (Please select your correct option)

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☒ Static variables

☐ Instance variable

☐ Primitive variables

☐ Dynamic Variables

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Question No : 35 of 52

Marks: 1 (Budgeted Time 1 Min)

Assume that a user wants to count, how many objects are created for a particular class, which one will be most suitable to perform this task:

Answer (Please select your correct option)

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☐ Const data member

☒ Non static data member

idea

☐ Static data member

☐ Global data member

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Question No : 36 of 52

Marks: 1 (Budgeted Time 1 Min)

We change the evaluation precedence of operators through operator overloading.

Answer (Please select your correct option)

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☐ Can

☐ Can not

doubt

☐ Only

☐ Just

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Question No : 37 of 52

Marks: 1 (Budgeted Time 1 Min)

In a de-queue, (chose the best option)

Answer (Please select your correct option)

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☐ Data can be quickly inserted or deleted at any arbitrary location.

☐ Data can be relatively slowly inserted or deleted at any arbitrary location.

☐ Data can not be quickly inserted or deleted at either end.

☐ Data can be relatively slowly inserted or deleted at either end.

Made by: Waqar Siddhu

Question No : 38 of 52

Marks: 1 (Budgeted Time 1 Min)

Suppose you create an uninitialized vector as follows:

```
vector<int> evec;  
After adding the statment,  
evec.push_back(21);  
what will happen?
```

Answer (Please select your correct option)

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☐ It will add an element to the start of evec and will initialize it with 21.

☐ It will add an element to the center of evec and will reinitialize it with 21.

☐ It will delete an element to the end (the back) of evec and will reinitialize it with 21.

☐ It will add an element to the end (the back) of evec and initialize it with 21.

Made by: Waqar Siddhu

Question No : 39 of 52

Marks: 1 (Budgeted Time 1 Min)

```
class DocElement
{
public:
    virtual void Print() { cout << "Generic element", }
};
class Heading : public DocElement
```

Answer (Please select your correct option)

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☐ Generic element

☐ Heading element

☒ Paragraph element

☐ Nothing will be printed.

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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)

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☐ 1

☐ 2

☐ 3

☒ As many as necessary.

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Question No : 41 of 52

Marks: 2 (Budgeted Time 4 Min)

Give at least one advantage and one disadvantage of templates.

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

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Rich text editor toolbar with icons for bold, italic, underline, list, link, unlink, and other formatting options.

Made by: Waqar Siddh

Question No : 42 of 52

Marks: 2 (Budgeted Time 4 Min)

Person class is an abstract class, which have some specific features. Briefly describe the silent features of abstract class.

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

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Question No : 43 of 52

Marks: 2 (Budgeted Time 4 Min)

While overloading stream insertion and extraction operators a programmer can not declare ostream and istream reference as constant. Why?

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

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Question No : 44 of 52

Marks: 2 (Budgeted Time 4 Min)

What do you mean by Stack unwinding?

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

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Made by: Waqar Siddhu

Question No : 45 of 52

Marks: 3 (Budgeted Time 6 Min)

Describe three properties necessary for a container to implement Generic Algorithms.

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

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Normal Arial 12 B I U

Made by: Waqar Siddhu

Question No : 46 of 52

Marks: 3 (Budgeted Time 6 Min)

Consider the code given below and answer the questions at the end,

```
class Base
{
private:
    int x;
```

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

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Normal Arial 12 B I U

Made by: Waqar Siddhu

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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Normal Arial 12 B I U

Made by: Waqar Siddhu

Question No : 48 of 52

Marks: 3 (Budgeted Time 6 Min)

Tell the logical error/s in the code given below with reference to resource management, also describe how we can correct that error/s.

```
class Test{  
  
public:  
int function1(){
```

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

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Made by: Waqar Siddhique

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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Made by: Waqar Siddhique

Question No : 50 of 52

Marks: 5 (Budgeted Time 10 Min)

What is virtual function? Explain it with coding example.

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

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Made by: Waqar Siddhique

Briefly give benefits of the use of static variable noOfStudents along with static method by considering following coded example:

```
class Student {  
    static int noOfStudents;
```

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

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