Marks: 58

Question No: 1 (Marks: 1) - Please choose one
*.doc is _____ by type.
.
► Sequential File
► Random Access File
► Data File
► Record File

Question No: 2 (Marks: 1) - Please choose one
Which of the following is NOT a preprocessor directive?
► #error
► #define
► #line
► #ndefine

Question No: 3 (Marks: 1) - Please choose one
The return type of operator function must always be void.
► True
► False
The syntax of the prototype of the overloaded operator function is: *return-type* operator
operator-symbol (parameter-list);

Question No: 4 (Marks: 1) - Please choose one
What does **(*this)** represents?
► The current function of the class
► The current pointer of the class
► The current object of the class
► A value of the data member
Whenever an object calls a member function, the function implicitly gets a pointer from the calling object. That pointer is known as *this* pointer. '*this*' is a key word. We cannot use it as a variable name. '*this*' pointer is present in the function, referring to the calling object. For example, if we have to refer a member, let's say *buf*, of our *String*class, we can write it simply as: b*uf ;*

Question No: 5 (Marks: 1) - Please choose one
The statement **cin.get ();** is used to,
► Read a string from keyboard
► Read a character from keyboard
► Read a string from file
► Read a character from file

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

When we do dynamic memory allocation in the constructor of a class, then it is necessary to provide a destructor.

► True

► False

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

Overloaded new operator function takes parameter of type *size_t* and returns

► void (nothing)

► void pointer

► object pointer

► int pointer

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

The second parameter of operator functions for <<>> are objects of the class for which we are overloading these operators.

► True

► False

The second parameter to *operator* << is an object of the class that we are overloading the operator for. Similar is the case for *operator* >>.

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

C++ is a case-sensitive language

► True

► False

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

To include code from the library in the program, such as iostream, a directive would be called up using this command.

► #include "iostream.h"

► include

► include

► #include

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

A template function must have only generic data types.

► True

► False

Its not compulsory, only min we have one generic data type but we can have native data type as well.

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

Template class can not have static variables.

► True

► False

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

What will be the correct syntax to assign an array named *arr* of 5 elements to a pointer *ptr*?

► *ptr = arr ;

► ptr = arr ;

► *ptr = arr[5] ;
► ptr = arr[5] ;

Question No: 14 (Marks: 1) - Please choose one
What will be the correct syntax to access the value of fourth element of an array using pointer ptr?
► ptr[3]
► (ptr+3)
► *(ptr+3)
► Both 1and 3

try this demo program to confirm result I wrote for you.
2 option will print the reference rest 1,3 are righ options

#include
#include
// #include
main()
{
int myarr [4]= {0,1,2,3};
int *ptr ;
ptr = myarr;
cout<
cout<<*(ptr+3);
cout<<(ptr+3);
int i = 0;
cin>> i;
}
Question No: 15 (Marks: 1) - Please choose one
If most significant bit of un-signed number is 1 then it represents a positive number.
► True
► False
The most significant bit is used as a sign bit. If this bit is zero, the number is considered positive. However, if it is 1, the number will be considered negative.

Question No: 16 (Marks: 1) - Please choose one
If there is a symbol (& sign) used with the variable name followed by data type then it refers to _____ and if & is being used with variable name then it refers to _____.
► Address of variable, reference variable
► Reference variable, value of variable
► Reference variable, address of variable
► Address of variable, value of variable
we see a data type followed by & sign, it's a reference. And when the & sign is being used in the code with a variable name then it is the address of the variable

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

We can also do conditional compilation with preprocessor directives.

► True

► False

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

The default value of a parameter can be provided inside the _____

► function prototype

► function definition

► both function prototype or function definition

► none of the given options.

The default value of a parameter is provided inside the function prototype or function definition.

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

Classes defined inside other classes are called _____ classes

► looped

► nested

► overloaded

► none of the given options.

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

What purpose do classes serve?

► Data encapsulation

► Providing a convenient way of modeling real-world objects

► Simplifying code reuse

► All of the given options

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

Every class contains _____.

► Constructor

► Destructor

► Both a constructor and a destructor

► None of the given options

Question No: 22 (Marks: 1) - Please choose one

new operator is used to allocate memory from the free store during

► Compile Time

► Run Time

► Link Time

► None of the given options

Question No: 23 (Marks: 1) - Please choose one

When an object of a class is defined inside another class then,

► Destructor of enclosing class will be called first

► Destructor of inner object will be called first
► Constructor and Destructor will be called simultaneously
► None of the given options

Question No: 24 (Marks: 1) - Please choose one
It is possible to define a class within another class.
► True
► False

Question No: 25 (Marks: 1) - Please choose one
New and Delete are also used with _____ and data types as well.
► Class, Objects
► Structures, Pointers
► Both Class and structures
► None of above
we prefer to use **new** and **delete** operators as they are designed to work with classes and objects

Question No: 26 (Marks: 1) - Please choose one
With New keyword, data types and class members are initialized with meaningful values instead of garbage.

► True
► False

Question No: 27 (Marks: 2)
How many arguments a Unary Operator take? Can we make a binary operator as unary operator?
Ans: Unary operator takes only one augument like i++ or i— (Post increment or post decrement operators for intergers) or ++i,--i (Pre increment or pre decrement operators for intergers) ,we can not make Unary operator as binary or binary as Unary operator.

Question No: 28 (Marks: 2)
Which arithmetic operators cannot have a floating point operand?
Ans:
Modulus operator
This operator can only be used with integer operands ONLY

Question No: 29 (Marks: 2)
What are manipulators? Give one example.
Ans:
The manipulators are like something that can be inserted into stream, effecting a change in the behavior. For example, if we have a floating point number, say pi (л), and have written it as *float pi = 3.1415926* ; Now there is need of printing the value of pi up to two decimal places i.e. 3.14 . This is a formatting functionality. For this, we have a *manipulator* that tells about width and number of decimal points of a number being printed.
Some manipulators are parameter less. We simply use the name of the manipulator that works. For example, we have been using *endl,* which is actually a manipulator, not data. When we write *cout << class="Apple-converted-space">* ; a new line is output besides flushing the buffer. Actually, it manipulates the output stream.

Question No: 30 (Marks: 2)

Write down piece of code that will declare a matrix of 3x3. And initialize all its locations with 0;
Ans:
int matrix [3] [3] ;
matrix [0] [0] = 0;
matrix [0] [1] = 0;
matrix [0] [2] = 0;
matrix [1] [0] = 0;
matrix [1] [2] = 0;
matrix [1] [2] = 0;
matrix [2] [0] = 0;
matrix [2] [1] = 0;
matrix [2] [2] = 0;
we can also do it as given below
int matrix [3][3] = { 0 }; //all elements 0

Question No: 31 (Marks: 3)
Which one (copy constructor or assignment operator) will be called in each of the following code segment?
1) Matrix m1 (m2);
2) Matrix m1, m2;
m1 = m2;
3) Matrix m1 = m2;
Ans:
1) Matrix m1 (m2); **copy constructor**
2) Matrix m1, m2;
m1 = m2; **assignment operator**
3) Matrix m1 = m2; **assignment operator**

Question No: 32 (Marks: 3)
What will be the output of following function if we call this function by passing int 5?
template T reciprocal(T x) {return (1/x); }
Ans:
1/5
Question No: 33 (Marks: 3)
Identify the errors in the following member operator function and also correct them.
math * operator(math m);
math * operator (math m)
{
math temp;
temp.number= number * number;
return number;
}
ANS:
The errors are in the arguments of the member operation function and also in the body of operator member
function.
Correct function should be
math *operator(math *m);
math *operator (math *m)
{

```
math temp;
temp = m;
temp.number= number * number;
return temp.number;
}
```

Question No: 34 (Marks: 5)

Write a program which defines three variables of type double which store three different values including decimal points, using setprecision manipulators to print all these values with different number of digits after the decimal number.

Ans:

```
#include
#include
int main ()
{
double x1 = 12345624.72345
double x2 = 987654.12345
double x3 = 1985.23456
cout <<>
cout <<>
cout <<>
return 0;
}
```

Question No: 35 (Marks: 5)

What are the advantages and disadvantages of using templates?

Ans:

Many thing can be possible without using templates but it do offer several clear advantages not offered by any other techniques:

Advanatages:

• Templates are easier to write than writing several versions of your similar code for different types. You create only one generic version of your class or function instead of manually creating specializations.

• Templates are type-safe. This is because the types that templates act upon are known at compile time, so the compiler can perform type checking before errors occur.

• Templates can be easier to understand, since they can provide a straightforward way of abstracting type information.

• It help in utilizing compiler optimizations to the extreme. Then of course there is room for misuse of the templates. On one hand they provide an excellent mechanism to create specific type-safe classes from a generic definition with little overhead.

Disadvantages:

On the other hand, if misused

• Templates can make code difficult to read and follow depending upon coding style.

• They can present seriously confusing syntactical problems esp. when the code is large and spread over several header and source files.

• Then, there are times, when templates can "excellently" produce nearly meaningless compiler errors thus requiring extra care to enforce syntactical and other design constraints. A common mistake is the angle bracket problem.

Question No: 36 (Marks: 5)

Suppose a program has a math class having only one data member **number**.
Write the declaration and definition of operator function to overload + operator for the statements of main function.
math obj1, obj2;
obj2= 10 + obj1 ;
Ans:
#include
math
{
mth operator + (obj1,obj2)
mth operator + (obj1,obj2)
{
mth operator + (obj1,obj2)
mth operator + (obj1,obj2)
}
}

FINALTERM EXAMINATION

Fall 2009

CS201- Introduction to Programming

Time: 120 min

Marks: 75

If we write a statement like **s2 = s1;** ____ will be the calling object and _____ will be passed to the = operator as an argument.

► s1, s1

► s1, s2

► s2, s1

► s2, s2

What will be the output of following statement?

cout << setfill('0') << setw(7) << 128 ;

► 0000128

► 0128128

► 1280000

► 0012800

The stream insertion and extraction operators are not already overloaded for _____

► Built-in data types

► User-defined data types

► Both built-in and user-defined types

► None of the given options

Constructors can not be overloaded like ordinary functions.

► True

► False

Overloaded new operator function takes parameter of type *size_t* and returns

► void (nothing)

► void pointer

► object pointer

► int pointer

Which of the following is the correct way to declare a variable x of integer type?

► x int ;

► integer x ;

► int x;

► x integer

Reserve words cannot be used as a variable name.

► True

► False

A template function must have at least ---------- generic data type

► Zero

► One

► Two

► Three

Template functions can also be overloaded

► True

► False

We can not make a member function of a class as template function.

► True

► False

When break statement is encountered in switch statement, it

► Stops the entire program

► Stops the execution of current statement

► Exits from switch statement

► None of the given options

We can also define a variable of user define data type (object) as static.

► True

► False

The declarator of Plus (+) member operator function is

► Class-Name operator + (Class-Name rhs)

► operator Class-Name + ( )

► operator Class-Name + (rhs)

s   ► Class-Name operator + ( )

Let suppose

```
int a, b, c, d, e;

a = b = c = d = e = 42;
```
This can be interpreted by the complier as:

► a = (b = (c = (d = (e = 42))));

► (a = b = (c = (d = (e = 42))));

► a = b = (c = (d = (e = 42)));

► (a = b) = (c = d) = (e = 42);

What will be the range of numbers generated by function rand () % 9?

► 0 to 9

► 1 to 9

► 0 to 8

► 1 to 8

Which of the following is the correct function call having array named *student* of 10 elements as a parameter.

► addRecord(student[]) ;

► addRecord(student) ;

► addRecord(student[10]) ;

► addRecord(*student) ;

Declaring structures does not mean that memory is allocated.

► True

► False

Identifier is a name that can be given to variables, labels and functions.

► True

► False

If a class A declares itself a friend of class B and a class B declares itself a friend of class C then

► Class A is also a friend of class C.

► Class B is also a friend of class A.

► Class A is also a friend of class C if A declares C as its friend.

► Class A is also a friend of class C if C declares A as its friend.

Which of the following statement is best regarding declaration of friend function?

► Friend function must be declared after public keyword.

► Friend function must be declared after private keyword.

► Friend function must be declared at the top within class definition.

► It can be declared anywhere in class as these are not affected by the public and

private keywords.

A pointer is a special type of variable that contain _____

► Memory Address

► Data values

► Both Values and Memory

► None of given of options

When memory for a program is allocated at run time then it is called _____

► static memory allocation

► dynamic memory allocation

► stack memory allocation

► virtual memory allocation

What purpose do classes serve?

► Data encapsulation

► Providing a convenient way of modeling real-world objects

► Simplifying code reuse

► All of the given options

Which of the following function cannot be overloaded?

► Member functions

► Utility functions

► Constructor

► Destructor

The following prototype of unary operator function indicates that it is _____ .

Date operator++(int)

► Member functions of post increment operator

► Member functions of pre increment operator

► Non-member functions of post increment operator

► Non-member functions of pre increment operator

Static variable which is defined in a function is initialized _____.

► Only once during its life time

► Every time the function call

► Compile time of the program

► None of the above

In the member initializer list, the data members are initialized,

► From left to right

► From right to left

► In the order in which they are defined within class

► None of the given options

If we do not indent the code properly it will _____

► Be a syntax error

► Be a logical error

► Not be an error at all

► None of the given options

Truth tables are used for analyzing _____.

► logical expressions

► arithmetic expressions

► both logical and arithmetic expressions

► none of the given options.

Static memory allocation is also known as _____

► Dynamic allocation

► Compile time allocation

► Run time allocation

► None of the given options

(Marks: 1)

What does *getline()* member function of cin stream do?

(Marks: 1)

When memory is allocated dynamically using new operator within the constructor of class then what is an appropriate place to de-allocate the memory?

(Marks: 2)

What will be the output of following code, if user input a number **123**?

int input ;

cin >> oct >> input;

cout << hex << input ;

(Marks: 2

What is memory leak?

(Marks: 3)

When we call calloc function to allocate memory and its return a NULL pointer what does it mean?

(Marks: 3)

Read the given code and explain code functionality.

```
Matrix :: Matrix ( const Matrix & m )
{
    numRows = m.numRows ;
    numCols = m.numCols ;
    elements = new ( double * ) [ numRows ] ;
    for ( int  i = 0 ; i < numRows ; i ++ )
        {
        elements [ i ] = new double [ numCols ] ;
        for ( int j = 0 ; j < numCols ; j ++ )
            elements [ i ] [ j ] = m.elements [ i ] [ j ] ;
    }
}
```

(Marks: 3)

What is the keyword '**this**' and what are the uses of '**this'** pointer?

(Marks: 5)

What do you mean by garbage collection and how it works in JAVA and C++ ?

(Marks: 5)

Explain the concept of separation of interface from the implementation in the context of classes, using a real world example.

(Marks: 10)

Write a simple program using the **get()** member function of **cin** object reading a text of **30** characters from the keyboard, store them in an array and then using **put()** member function of **cout** object to display them on the screen.

s**(Marks: 10)**

Overload the Binary Assignment (=) Operator.

Write a program which has a class **List**, This class should have Two data members, an array of integers **list[]** and an integer variable **length** (i.e. number of elements in the list).The class should further contain a

default constructor, a **Print()** function which display the list and a Function **insert()** which insert an element in the list and Assignment (=) Operator function, which contain code for the assignment of one object to other. .

In main function define two objects **list1** and **list2** and use the statement **list2 = list1;** and use (call) **print** function with both objects

MCQS of cs201

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.

Question # 1

What does 5 | 6 , evaluate to in decimal where '|' is bitwise OR operator?

1) :   3

2) :   4

3) :   5

4) :   7

Correct Option :   **From :**

Question # 2

We can also use member functions with cin and cout objects

1) :   True

2) :   FALSE

3) :

4) :

**Correct
Option   From :
:   2**

Question # 3

If the statements
int j,k;
j = 123;
k= 234;
int* q, * r;
cout < < *q < < ' ' < < * r ;
are executed, what will be displayed?

1) :   The values of j and k

2) :   The addresses of q and r

3) :   The addresses of j and k

4) :   garbage values

**Correct
Option   From :   Lecture 14
:   4**

Question # 4

Which one of the following operators is a unary operator?

1) :   OR (||)

2) :   AND (&&)

3) :   XOR (^)

4) :   Complement operator (~)

**Correct
Option
:   4**   **From :**   **Lecture 16**

Question # 5

The statement i++; is equivalent to

1) :   i = i + i;

2) :   i = i + 1;

3) :   i = i - 1;

4) :   i --;

**Correct
Option
:   2**   **From :**   **Lecture 16**

Question # 6

A variable which is defined inside a function is called

1) :   Automatic variable

2) :   Global variable

3) :   Functional variable

4) :   None of the given option

**Correct
Option**   **From :**   **Lecture 16**

:   3

Question # 7

If we open a file stream myfile for reading, what will give us the current position of the file pointer?

1) :   tellg()

2) :   tellp()

3) :   seekg()

4) :   seekp()

Correct Option :   1   **From :**   **Lecture 19**

Question # 8

Application Software's are use to

1) :   Type letters

2) :   Control computer hardware

3) :   Solve end user problems

4) :   Develop Graphics

Correct Option :   3   **From :**   **Lecture 2**

Question # 9

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

1) :   template < class class_type>

2) :   template < class data_type>

3) :   template < class T >, Here T can be replaced with any name but it is preferable.

4) :   class template

Correct Option :   3   **From :**   **Lecture 21**

Question # 10

When a macro takes arguments then it is called_____.

1) :   Function

2) :   Procedure

3) :   Parameterized macro

4) :   Simple macro

Correct Option :   3   **From :**   **Lecture 23**

Question # 11

By default an array of characters is passed by value to a function,

1) :   TRUE

2) :   FALSE

3) :

4) :

Correct Option : 2   **From :**   **Lecture 23**

Question # 12

Using dynamic memory is more efficient then the static memory.

1) :   True

2) :   FALSE

3) :

4) :

Correct Option : 1   **From :**   **Lecture 24**

Question # 13

Using dynamic memory is more _____ then the static memory.

1) :   Costly

2) :   Expansive

3) :   efficient

4) :   Difficult

Correct Option : 3   **From :**   **Lecture 24**

Question # 14

Before exiting the program, make sure that the allocated memory has freed.

1) :   True

2) :   FALSE

3) :

4) :

Correct Option :   **From :**   **Lecture 24**
       1

Question # 15

A preprocessor directive is identified by _____ symbol

1) :   #

2) : $

3) :   %

4) :   ##

Correct Option :   **From :**   **Lecture 25**
       1

Question # 16

The default constructor has no arguments

1) :   True

2) :   FALSE

3) :

4) :

Correct Option :   **From :**   **Lecture 26**
       1

Question # 17

The data members of the class are initialized at runtime

1) :   True

2) :   FALSE

3) :

4) :

Correct Option :   **From :**   **Lecture 26**
       1

Question # 18

The data members of the class are initialized at creation Time

1) :   True

2) :   FALSE

3) :

4) :

Correct Option :   **From :**   **Lecture 26**
       2

Question # 19

The function call to a default constructor

1) :   looks like any function call, except there is no return value

2) :   never takes any arguments

3) :   creates but cannot initialize an object

4) :   is made automatically when an object is created

Correct Option :   **4**   **From :**   **Lecture 26**

Question # 20

A friend function of a class has access

1) :   To all data member and functions of the class

2) :   Only to other friend functions of the class

3) :   Only to private data of the class

4) :   Only to public data of the class

Correct Option :   **3**   **From :**   **Lecture 26**

Question # 21

The new operator

1) :   is used to declare objects or variables

2) :   can not create and initialize an object

3) :   names an object or variable

4) :   can allocate an appropriate amount of memory for an object or variable

Correct Option : 4   **From :**   **Lecture 26**

Question # 22

Explicitly write keyword private in the class definition

1) :   True

2) :   FALSE

3) :

4) :

Correct Option : 1   **From :**   **Lecture 26**

Question # 23

There is a class Student, Which one of the following is a valid destructor for this class.

1) :   Student();

2) :   ~ Student();

3) :   ~ Student(int);

4) :   int~ Student();

Correct Option : 2   **From :**   **Lecture 27**

Question # 24

The reserved words public and private comes under the category

1) :   structures

2) :   strings

3) :   accessibility modifiers

4) :   types of functions

**Correct
Option
:**   1   **From :**   **Lecture 27**

Question # 25

There is a class Student, Which one of the following is a valid destructor for this class.

1) :   Student();

2) :   Student(int);

3) :   ~ Student();

4) :   ~ Student(int);

**Correct
Option
:**   3   **From :**   **Lecture 27**

Question # 26

The function call to a default constructor

1) :   looks like any function call, except there is no return value

2) : is made automatically when an object is created

3) : creates but cannot initialize an object

4) : never takes any arguments

Correct Option : 2   **From :** **Lecture 27**

Question # 27

The new operator

1) : can allocate an appropriate amount of memory for an object or variable

2) : can not create and initialize an object

3) : is used to declare objects or variables

4) : returns a pointer to an object or variable

Correct Option : 4   **From :** **Lecture 28**

Question # 28

The new operator

1) : is used to declare objects or variables

2) : can not create and initialize an object

3) : names an object or variable

4) : can allocate an appropriate amount of memory for an object or variable

Correct Option   **From :** **Lecture 28**

Question # 29

Which of the following operators can not be overloaded?

1) :   new

2) :   delete

3) :   +=

4) :   sizeof

Correct Option :   2   **From :**   **Lecture 28**

Question # 30

Analyze the following code
class myclass
{
private:
float x,y;
public:
void myclass
(float a, float b)
{
x=a;
y=b;
}
void diplay()
{
cout<<ENDL<<X<<ENDL<<Y;
}
};
What is wrong with the above code?

1) :   The member functions should be private

2) :   constructor must not have a return type

3) :   The constructor should have no body

4) :   There is no error in the given code

Correct Option :   2   **From :**   **Lecture 28**

Question # 31

this is a pointer which always points to the current object.

1) :   TRUE

2) :   FALSE

3) :

4) :

Correct Option :   1   **From :**   **Lecture 28**

Question # 32

Which of the following is the correct C++ syntax to allocate space dynamically for an array of 10 int?

1) :   new int(10) ;

2) :   new int[10] ;

3) :   int new(10) ;

4) :   int new[10];

Correct Option   **From :**   **Lecture 28**

:   4

Question # 33

The function free() returns back the allocated memory got thorough calloc and malloc to _____ .

1) :   stack

2) :   heap

3) :   stack and heap

4) :   None of the given options

Correct
Option   From :   Lecture 28
:   2

Question # 34

Whenever new operator is used, no number of bytes or sizeof operator is required.

1) :   True

2) :   FALSE

3) :

4) :

Correct
Option   From :   Lecture 28
:   1

Question # 35

If the memory in the free store is not sufficient enough to fulfill the request, malloc()

function returns NO pointer.

1) :   True

2) :   FALSE

3) :

4) :

**Correct
Option   From :   Lecture 28
:   2**

Question # 36

A friend function

1) :   must be having a prototype with no arguments

2) :   can access the private data of the class that declares it a friend

3) :   cannot access the data members of a class

4) :   must be invoked by the class that declares it a friend

**Correct
Option   From :   Lecture 29
:   2**

Question # 37

A function declaration has the same relationship to a function definition that

1) :   a class definition has to an object definition

2) :   an object declaration has to an object

3) :   a variable has to a variable declaration

4) : a variable declaration has to the variable itself

Correct Option : 3   **From :** **Lecture 29**

Question # 38

A friend function

1) : must be having a prototype with no arguments

2) : must be invoked by the class that declares it a friend

3) : must be invoked by an object of the class that declares it a friend

4) : can access the private data of the class that declares it a friend

Correct Option : 4   **From :** **Lecture 29**

Question # 39

The reserved words public and private comes under the category

1) : structures

2) : strings

3) : accessibility modifiers

4) : types of functions

Correct Option : 3   **From :** **Lecture 29**

Question # 40

The prototype of friend functions must be written _____ the class and its definition must be written _____

1) :   inside, inside the class

2) :   inside, outside the class

3) :   outside, inside the class

4) :   outside, outside the class

Correct Option :   2   **From :**   **Lecture 29**

Question # 41

In functions that return reference, use _____variables.

1) :   Local

2) :   Global

3) :   Global or static

4) :   None of the given option

Correct Option :   3   **From :**   **Lecture 30**

Question # 42

Operator Overloading is quite similar to Function Overloading.

1) :   True

2) :   FALSE

3) :

4) :

Correct
Option   **From :**   **Lecture 30**
:   1

Question # 43

There are two types of operators to overload: unary and binary.

1) :   True

2) :   FALSE

3) :

4) :

Correct
Option   **From :**   **Lecture 30**
:   1

Question # 44

The declarator of Minus(-) member operator function is

1) :   Class-Name operator - (Class-Name rhs)

2) :   operator Class-Name - ( )

3) :   operator Class-Name - (rhs)

4) :   Class-Name operator - ( )

Correct
Option   **From :**   **Lecture 30**
:

Question # 45

Operator functions written as non-members but friends of the class, get both the operands as their arguments.

1) :   True

2) :   FALSE

3) :

4) :

**Correct
Option   From :   Lecture 30
:   1**

Question # 46

We cannot do arithmetic with references like pointers.

1) :   True

2) :   FALSE

3) :

4) :

**Correct
Option   From :   Lecture 30
:   1**

Question # 47

In functions that return reference, use global or static variables.

1) :   True

2) :   FALSE

3) :

4) :

Correct Option :   1   **From :**   **Lecture 30**

Question # 48

In functions that return reference, use only static variables.

1) :   True

2) :   FALSE

3) :

4) :

Correct Option :   2   **From :**   **Lecture 30**

Question # 49

The reference data types are used as ordinary variables without any dereference operator.

1) :   True

2) :   FALSE

3) :

4) :

Correct Option   **From :**   **Lecture 30**

Question # 50

Which of the following operators can not be overloaded?

1) : new

2) : delete

3) : +=

4) : sizeof

Correct Option : 3   **From :** Lecture 31

Question # 51

The declarator of Plus (+) member operator function is

1) : Class-Name operator + (Class-Name rhs)

2) : operator Class-Name + ( )

3) : operator Class-Name + (rhs)

4) : Class-Name operator + ( )

Correct Option : 1   **From :** Lecture 31

Question # 52

We can create a new operator through operator overloading.

1) :   TRUE

2) :   FALSE

3) :

4) :

**Correct
Option   From :   Lecture 31
:   2**

Question # 53

In overloading the assignment (=) operator, which object will call the operator function?

1) :   Right object of the assignment operator

2) :   Left object of the assignment operator

3) :   Both objects will call the assignment operator

4) :   No object will call the assignment operator

**Correct
Option   From :   Lecture 31
:   3**

Question # 54

Which statement about operator overloading is false?

1) :   New operators can never be created

2) :   Certain overloaded operators can change the number of arguments they take.

3) :   The precedence of an operator cannot be changed by overloading.

4) :   Overloading cannot change how an operator works on built-in types.

Correct Option : 2 **From :** **Lecture 31**

Question # 55

Initializing the data members in the definition of the class is _____

1) : syntax error

2) : logical error

3) : not an error

4) : none of the given options

Correct Option : 2 **From :** **Lecture 31**

Question # 56

When an array of object is created dynamically then there is no way to provide parameterized constructors for array of objects.

1) : True

2) : FALSE

3) :

4) :

Correct Option : 1 **From :** **Lecture 32**

Question # 57

If we define an identifier with the statement #define PI 3.1415926 then during the execution of the program the value of PI _____.

1) :   can not be replaced

2) :   None of the given options

3) :   Remain constant.

4) :   can be changed by some operation

Correct Option : 3   **From :**   **Lecture 34**

Question # 58

The default constructor is defined by the C++ compiler automatically for every class that has no default constructor (parameterless constructor) defined already.

1) :   True

2) :   FALSE

3) :

4) :

Correct Option : 1   **From :**   **Lecture 36**

Question # 59

The default constructor (parameterless constructor) is called for each element in the array allocated with new.

1) :   True

2) :   FALSE

3) :

4) :

Correct Option : 1   **From :**   **Lecture 36**

Question # 60

The new operator returns a Type *, accepts a parameter of type size_t.

1) :   True

2) :   FALSE

3) :

4) :

Correct Option : 2   **From :**   **Lecture 36**

Question # 61

The new operator returns a void *, accepts a parameter of type size_t.

1) :   True

2) :   FALSE

3) :

4) :

Correct Option : 1   **From :**   **Lecture 36**

Question # 62

The delete operator returns nothing (void) and accepts a pointer of void * to the memory block.

1) :   True

2) :   FALSE

3) :

4) :

Correct Option :   1   **From :**   **Lecture 36**

Question # 63

The delete operator returns nothing (void) and accepts a pointer of type * to the memory block.

1) :   True

2) :   FALSE

3) :

4) :

Correct Option :   2   **From :**   **Lecture 36**

Question # 64

By overloading new and delete operators, only allocation and deallocation part can be overridden.

1) :   True

2) :   FALSE

3) :

4) :

Correct Option : **From :**   **Lecture 36**
      1

Question # 65

new and delete can overload in c++

1) :   True

2) :   FALSE

3) :

4) :

Correct Option : **From :**   **Lecture 36**
      2

Question # 66

By overloading the array operator ([]), one can implement mechanism to check for array bound.

1) :   True

2) :   FALSE

3) :

4) :

Question # 67

Stream insertion (<<) and extraction operators (>>) are always implemented as _____ functions.

1) :   Member

2) :   non-member

3) :   Inside

4) :   Out Side

Question # 68

For operator >>, the second parameter must also be passed by reference.

1) :   True

2) :   FALSE

3) :

4) :

Question # 69

Static member functions

1) :   must be declared inside the class definition, but defined outside it

2) :   must be declared private

3) :   have multiple copies for the entire class

4) :   can access only static data

**Correct
Option
:**   4   **From :**   **Lecture 38**

Question # 70

A copy constructor

1) :   creates an object initialized with the same data as an existing object

2) :   takes an arbitrary number of arguments

3) :   copies the data of any two constructors in that class

4) :   takes no arguments

**Correct
Option
:**   1   **From :**   **Lecture 39**

Question # 71

A copy constructor

1) :   takes no arguments

2) :   copies the data of any two constructors in that class

3) :   creates an object initialized with the same data as an existing object

4) : creates a new object that later may be assigned the data of an existing object

Correct Option : 3   **From :**   **Lecture 39**

Question # 72

A class can contain instances of other classes as its data members.

1) : True

2) : FALSE

3) :

4) :

Correct Option : 1   **From :**   **Lecture 40**

Question # 73

The inner data members of the object are constructed and then the object itself.

1) : True

2) : FALSE

3) :

4) :

Correct Option : 1   **From :**   **Lecture 40**

Question # 74

The order of destruction of an object is equle to this construction order, where the outer object is destroyed first before the inner data members.

1) :   True

2) :   FALSE

3) :

4) :

Correct Option :   2   **From :**   **Lecture 40**

Question # 75

Initializer list is used to initialize the inner objects at the construction time.

1) :   True

2) :   FALSE

3) :

4) :

Correct Option :   1   **From :**   **Lecture 40**

Question # 76

In C++, we can have structures or classes defined inside classes. Classes defined within other classes are called _____ classes.

1) :   nested

2) :   Child

3) :   Parent

4) :   Branch

Correct Option :   **1**   **From :**   **Lecture 40**

Question # 77

Static member functions

1) :   must be declared inside the class definition, but defined outside it

2) :   must be declared private

3) :   have multiple copies for the entire class

4) :   can access only static data

Correct Option :   **4**   **From :**   **Lecture 41**

Question # 78

The template functions do NOT promote the code reuse

1) :   TRUE

2) :   FALSE

3) :

4) :

Correct Option   **From :**   **Lecture 41**

: 2

Question # 79

In the member initializer list, the data members are initialized,

1) : From left to right

2) : From right to left

3) : In the order in which they are defined within class

4) : None of the given options

**Correct
Option
:** 3
From : **Lecture 41**

Question # 80

It is possible to define a class within another class.

1) : TRUE

2) : FALSE

3) :

4) :

**Correct
Option
:** 1
From : **Lecture 41**

Question # 81

When ever dynamic memory allocation is made in C/C++, it is freed_____.

1) :   Explicitly

2) :   Implicitly

3) :   Both explicitly and implicitly

4) :   None of the given options

**Correct
Option
:**   1   **From :**   **Lecture 42**

Question # 82

User-defined manipulators are allowed in c++.

1) :   TRUE

2) :   FALSE

3) :

4) :

**Correct
Option
:**   1   **From :**   **Lecture 42**

Question # 83

It is a way of reusing the code when we contain objects of our already written classes into a new class,

1) :   TRUE

2) :   False

3) :

4) :

Correct Option : 1   **From :**   **Lecture 42**

Question # 84

Structured Query Language is used for _____

1) :   Databases Management

2) :   Networks

3) :   Writing Operating System

4) :   none of the given options

Correct Option : 1   **From :**   **Lecture 45**

Question # 85

In if structure the block of statements is executed only,

1) :   Type letters

2) :   When it contain arithmetic operators

3) :   When it contain logical operators

4) :   When the condition is true

Correct Option : 4   **From :**   **Lecture 6**

Question # 86

Loader transfers the executable code from main memory to hard disk.

1) :   TRUE

2) :   FALSE

3) :

4) :

Correct Option :   2   **From :**   **Lecture 6**

Question # 87

When break statement is encountered in switch statement, it

1) :   Stops the entire program

2) :   Stops the execution of current statement

3) :   Exits from switch statement

4) :   None of the given options

Correct Option :   3   **From :**   **Lecture 7**

FINALTERM EXAMINATION

Spring 2010

CS201- Introduction to Programming

Ref No:

Time: 90 min

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

---

*.doc is _____ by type.

.

►Sequential File

►Random Access File

►Data File

►Record File

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

Which of the following is NOT a preprocessor directive?

►#error

►#define

►#line

►#ndefine

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

The return type of operator function must always be void.

►True

►False

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

What does **(*this)** represents?

►The current function of the class

►The current pointer of the class

►The current object of the class

►A value of the data member

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

The statement **cin.get ();** is used to,

►Read a string from keyboard

►Read a character from keyboard

►Read a string from file

►Read a character from file

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

When we do dynamic memory allocation in the constructor of a class, then it is necessary to provide a destructor.

►True

►False

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

Overloaded new operator function takes parameter of type *size_t* and returns

►void (nothing)

►void pointer

▶object pointer

▶int pointer

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

The second parameter of operator functions for << and >> are objects of the class for which we are overloading these operators.

▶True

▶False

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

--- C++ is a case-sensitive language

▶True

▶False

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

--- To include code from the library in the program, such as iostream, a directive would be called up using this command.

▶#include "iostream.h"

▶include <iostream.h>

▶include <iostream.h>

▶#include <iostream.h>

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

template function must have only generic data types.

▶True

▶False

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

Template class can not have static variables.

▶True

▶False

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

What will be the correct syntax to assign an array named ***arr*** of 5 elements to a pointer ***ptr***?

► *ptr = arr ;
► ptr = arr ;
► *ptr = arr[5] ;
► ptr = arr[5] ;

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

What will be the correct syntax to access the value of fourth element of an array using pointer ptr?

▶ptr[3]

▶(ptr+3)

►*(ptr+3)

►Both 1and 3

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

If most significant bit of un-signed number is 1 then it represents a positive number.

►True

►False

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

If there is a symbol (& sign) used with the variable name followed by data type then it refers to _____ and if & is being used with variable name then it refers to _____.

►Address of variable, reference variable

►Reference variable, value of variable

►Reference variable, address of variable

►Address of variable, value of variable

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

We can also do conditional compilation with preprocessor directives.

►True

►False

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

The default value of a parameter can be provided inside the _____

►function prototype

►function definition

►both function prototype or function definition

►none of the given options.

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

Classes defined inside other classes are called _____ classes

►looped

►nested

►overloaded

►none of the given options.

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

What purpose do classes serve?

►Data encapsulation

►Providing a convenient way of modeling real-world objects

►Simplifying code reuse

►All of the given options

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

Every class contains _____.

►Constructor

►Destructor

►Both a constructor and a destructor

►None of the given options

Question No: 22   (Marks: 1) - Please choose one

new operator is used to allocate memory from the free store during

►Compile Time

►Run Time

►Link Time

►None of the given options

Question No: 23   (Marks: 1) - Please choose one

When an object of a class is defined inside another class then,

►Destructor of enclosing class will be called first

►Destructor of inner object will be called first

►Constructor and Destructor will be called simultaneously

►None of the given options

Question No: 24   (Marks: 1) - Please choose one

It is possible to define a class within another class.

►True

►False

Question No: 25   (Marks: 1) - Please choose one

New and Delete are also used with _____ and data types as well.

►Class, Objects

►Structures, Pointers

►Both Class and structures

►None of above

Question No: 26   (Marks: 1) - Please choose one

_____ With New keyword, data types and class members are initialized with meaningful values instead of garbage.

►True

►False

Question No: 27   (Marks: 2)

_____ How many arguments a Unary Operator take? Can we make a binary operator as unary operator?

Ans: Unary operator takes only one augument like i++ or i— (Post increment or post decrement operators for intergers) or ++i,--i (Pre increment or pre decrement operators for intergers) ,we can not make Unary operator as binary or binary as Unary operator.

Question No: 28   (Marks: 2)

Which arithmetic operators cannot have a floating point operand?

Ans:

Modulus operator

This operator can only be used with integer operands ONLY

Question No: 29   (Marks: 2)

What are manipulators? Give one example.

Ans:

The manipulators are like something that can be inserted into stream, effecting a change in the behavior. For example, if we have a floating point number, say pi (л), and have written it as _float pi = 3.1415926_ ; Now there is need of printing the value of pi up to two decimal places i.e. 3.14 . This is a formatting functionality. For this, we have a _manipulator_ that tells about width and number of decimal points of a number being printed.

Some manipulators are parameter less. We simply use the name of the manipulator that works. For example, we have been using *endl*, which is actually a manipulator, not data. When we write *cout <<
endl* ; a new line is output besides flushing the buffer. Actually, it manipulates the output stream.

Question No: 30   (Marks: 2)

Write down piece of code that will declare a matrix of 3x3. And initialize all its locations with 0;

Ans:

int matrix [3] [3] ;

matrix [0] [0] = 0;

matrix [0] [1] = 0;

matrix [0] [2] = 0;

matrix [1] [0] = 0;

matrix [1] [2] = 0;

matrix [1] [2] = 0;

matrix [2] [0] = 0;

matrix [2] [1] = 0;

matrix [2] [2] = 0;

we can also do it as given below

```
int matrix [3][3] = { 0 }; //all elements 0
```

Question No: 31   (Marks: 3)

Which one (copy constructor or assignment operator) will be called in each of the following code segment?

1)   Matrix m1 (m2);

2)   Matrix m1, m2;

        m1 = m2;

3)   Matrix m1 = m2;

Ans:

1)   Matrix m1 (m2);   **copy constructor**

2)   Matrix m1, m2;

        m1 = m2;   **assignment operator**

3)   Matrix m1 = m2; **assignment operator**

Question No: 32   (Marks: 3)

What will be the output of following function if we call this function by passing int 5?


```
template <class T>
T reciprocal(T x)
{
return (1/x);
}
```


Ans:

1/5

Question No: 33   (Marks: 3)

Identify the errors in the following member operator function and also correct them.

math * operator(math m);

math * operator (math m)

{

   math temp;

   temp.number= number * number;

   return number;

}

ANS:

The errors are in the arguments of the member operation function and also in the body of operator member function.

Correct function should be

math *operator(math *m);

math *operator (math *m)

{

   math temp;

   temp = m;

   temp.number= number * number;

   return temp.number;

}

Question No: 34   (Marks: 5)

Write a program which defines three variables of type double which store three different values including decimal points, using setprecision manipulators to print all these values with different number of digits after the decimal number.

Ans:

```cpp
#include <iostream>

#include <iomanip>


int main ()

{

   double x1 = 12345624.72345

   double x2 =  987654.12345

   double x3 =  1985.23456

   cout << setprecision (3) << x1<< endl;

   cout << setprecision (4) << x2 << endl;

   cout << setprecision (5) << x3<< endl;


   return 0;

}
```

Question No: 35   (Marks: 5)

What are the advantages and disadvantages of using templates?

Ans:

Many thing can be possible without using templates but it do offer several clear advantages not offered by any other techniques:

Advanatages:

 • Templates are easier to write than writing several versions of your similar code for different types. You create only one generic version of your class or function instead of manually creating specializations.

• Templates are type-safe. This is because the types that templates act upon are known at compile time, so the compiler can perform type checking before errors occur.

 • Templates can be easier to understand, since they can provide a straightforward way of abstracting type information.

• It help in utilizing compiler optimizations to the extreme. Then of course there is room for misuse of the templates. On one hand they provide an excellent mechanism to create specific type-safe classes from a generic definition with little overhead.

Disadvantages:

On the other hand, if misused

• Templates can make code difficult to read and follow depending upon coding style.

• They can present seriously confusing syntactical problems esp. when the code is large and spread over several header and source files.

 • Then, there are times, when templates can "excellently" produce nearly meaningless compiler errors thus requiring extra care to enforce syntactical and other design constraints. A common mistake is the angle bracket problem.

Question No: 36   (Marks: 5)

Suppose a program has a math class having only one data member **number**.

Write the declaration and definition of operator function to overload + operator for the statements of main function.

    math obj1, obj2;

    obj2= 10 + obj1 ;

Ans:

#include <iostream.h>

math

{

mth operator + (obj1,obj2)

mth operator + (obj1,obj2)

{

 mth operator + (obj1,obj2)

mth operator + (obj1,obj2)

}

}

…………………………………………………………………………

CS201 final paper 2010

FINALTERM EXAMINATION

Spring 2010

CS201- Introduction to Programming

Time: 90 min

Marks: 58

Student Info	
Student ID:	
Center:	
Exam Date:	

For Teacher's Use Only

Q No.	1	2	3	4	5	6	7	8	Total
Marks									
Q No.	9	10	11	12	13	14	15	16	
Marks									
Q No.	17	18	19	20	21	22	23	24	
Marks									
Q No.	25	26	27	28	29	30	31	32	
Marks									
Q No.	33	34	35	36					
Marks									

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

If it is required to copy an array to another array then,

▶Both arrays must be of the same size and data type

▶Both arrays may be of different size

▶Both arrays may be of different data type

▶Both arrays may be of different size and type

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

Dealing with structures and functions passing by reference is the most economical method

▶True

▶False

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

eof( ), bad( ), good( ), clear( ) all are manipulators.

▶True

▶False

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

Overloaded new operator function takes parameter of type *size_t* and returns

▶void (nothing)

▶void pointer

▶object pointer

►int pointer

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

When new operator is overloaded at global level then corresponding built-in new operator will not be visible to whole of the program.

►True

►False

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

If there is more than one statement in the block of a for loop, which of the following must be placed at the beginning and the ending of the loop block?

►parentheses ( )

►braces { }

►brackets [ ]

►arrows < >

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

The return type of a function that do not return any value must be _____

   ►float

   ►int

   ►void

   ►double

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

UNIX has been developed in _____ language.

►JAVA

►B

►C

►FORTRAN

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

Like member functions, _____ can also access the private data members of a class.

►Non-member functions

►Friend functions

►Any function outside class

►None of the given options

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

Which of the following statement is best regarding declaration of friend function?

►Friend function must be declared after public keyword.

►Friend function must be declared after private keyword.

►Friend function must be declared at the top within class definition.

►It can be declared anywhere in class as these are not affected by the public and private keywords.

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

The operator function overloaded for an Assignment operator (=) must be

►Non-member function of class

►Member function of class

►Friend function of class

►None of the given options

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

The **endl** and **flush** are _____

►Functions

►Operators

►Manipulators

►Objects

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

If a symbolic constant has been defined, it will be an error to define it again.

►True

►False

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

The operator used for casting, in C, is standard _____ operator.

►none of the given options.

►cast

►cost

►const

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

Constructors can not be overloaded like ordinary functions.

▶True

▶False

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

Which of the following function call is correct for the function prototype?

defaultParameters (int a, int b = 7, char z = '*');

▶defaultParameters (5);

▶defaultParameters (5, '8');

►defaultParameters (6, '#');

►defaultParameters (0, 0, '*', 0);

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

When an operator function is defined as member function for a binary Plus (+) operator then the number of argument it take is/are.

►Zero

►One

►Two

►N arguments

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

We can not define a variable of user-defined data type in the class.

►True

►False

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

When an object of a class is defined inside an other class then,

►Constructor of enclosing class will be called first

►Constructor of inner object will be called first

►Constructor and Destructor will be called simultaneously

►None of the given options

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

The appropriate data type to store the number of rows and colums of the matrix is_____.

►float

►int

►char

►none of the given options.

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

Class is a user defined_____.

►data type

►memory referee

►value

►none of the given options.

Question No: 22   (Marks: 1) - Please choose one

 A pointer variable can be,

►Decremented

►Incremented

►Multiplied

►Both Decremented and Decremented

Question No: 23   (Marks: 1) - Please choose one

NULL value has been defined in _____ and _____ header files.

▶strings.h and iostream.h

▶ctype.h and conio.c

▶conio.c and conio.h

▶stdlib.h and stddef.h

Question No: 24   (Marks: 1) - Please choose one

A Matrix can be composed of ints, floats or doubles as their elements. Best way is to handle this , _____

▶Write a separate class to handle each

►Use templates

►Use strings to store all types

►None of the given options

Question No: 25   (Marks: 1) - Please choose one

"setprecision" manipulator will set

►The number of digits after the decimal point

►The number of digits before the decimal point

►The number of digits in a number

►None of the given options

Question No: 26   (Marks: 1) - Please choose one

Which of the following option will be true, if we overload "-=" operator?

▶only - operator needs to be overloaded

▶Minus (-) and = operators need to be overloaded

▶the -= operator need to be overloaded explicitly

▶the - and = operators need to be overloaded implicitly

Question No: 27   (Marks: 2)

Suppose there is a template function '**func**' having argument of type U and return type T. What will be the C++ syntax to call this function, passing a variable '**x**' of type double and returning an int type? http://vuattach.ning.com/

Question No: 28   (Marks: 2)

Which variable will be used in inner code block if we have the same names of variable at outer code block and inner code block?

Question No: 29   (Marks: 2)

What is the benefit of reference and where can we use it?

Question No: 30   (Marks: 2)

Write the C++ code for the declaration of overloaded stream insertion and stream extraction operator for the object **d** of type **Date**.

Question No: 31   (Marks: 3)

What will be the output of following functions if we call these functions three times?

1)

```
void func1(){
int x = 0;
x++;
cout << x << endl;
}
```

2)

```
void func2(){
static int x = 0 ;
x++;
cout << x << endl ;
}
```

Question No: 32   (Marks: 3)

If the requested memory is not available in the system then what does **calloc/malloc** and **new** operator return?

Question No: 33   (Marks: 3)

Suppose an object of class A is declared as data member of class B.

(i) The constructor of which class will be called first?

(ii) The destructor of which class will be called first?

Question No: 34   (Marks: 5)

What is difference between Unary and binary operators and how they can be overloaded?

Question No: 35   (Marks: 5)

Suppose we have the following class.

class Matrix

{

private:

int Elements[3][3];

};

Write the operator function of stream extraction operator (>>) for this class.

Question No: 36   (Marks: 5)

What is meant by user interface and class interface in C++ ? And what role a class interface can play in user interface [Marks 5] http://vuattach.ning.com/

FINALTERM EXAMINATION

Spring 2009

CS201- Introduction to Programming

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

There are mainly -------------------- types of software

▶ Two

▶ Three

▶ Four

▶ Five

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

When x = 7; then the expression x%= 2; will calculate the value of x as,

► 1

► 3

► 7

► 2

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

 A pointer variable can be,

► Decremented only

► Incremented only

► Multiplied only

► Both 1 and 2

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

---

setprecision is a parameter less manipulator.

► True

► False

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

We can change a Unary operator to Binary operator through operator overloading.

► False

► True

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

delete operator is used to return memory to free store which is allocated by the **new** operator

► True

► False

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

When we do dynamic memory allocation in the constructor of a class, then it is necessary to provide a destructor.

► True

► False

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

What is the functionality of the following statement?

String str[5] = {String("Programming"), String("CS201")};

► Default constructor will call for all objects of array

► Parameterized constructor will call for all objects of array

► Parameterized constructor will call for first 2 objects and default constructor for remaining objects

► Default constructor will call for first 3 objects and Parameterized constructor for remaining objects

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

What is the sequence of event(s) when allocating memory using new operator?

► Only block of memory is allocated for objects

► Only constructor is called for objects

► Memory is allocated first before calling constructor

► Constructor is called first before allocating memory

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

Deleting an array of objects without specifying [] brackets may lead to memory leak

► True

► False

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

Which of the following data type will be assumed if no data type is specified with constant?

► short

► float

► int

► double

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

There is an array of characters having name 'course' that has to be initialized by string 'programming' which of the following is the correct way to do this,

i. course[] = {'p', 'r', 'o', 'g', 'r', 'a', 'm', 'm', 'i', 'n', 'g'};
ii. course[] = 'programming' ;
iii. course[12] = "programming" ;
iv. course = "programming" ;

Choose the correct options.

► (i) and (ii) only

► (i) and (iv) only

► (i) and (iii) only

► (ii) and (iii) only

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

What will be the correct syntax of the following statement?

ptr is a constant pointer to integer.

► const int *ptr ;

► const *int ptr ;

► int const *ptr ;

► int *const ptr ;

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

Overloaded member operator function is always called by _____

► Class

► Object

► Compiler

► Primitive data type

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

Loader loads the executable code from hard disk to main memory.

► True

► False

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

Which of the following is the correct C++ syntax to allocate space dynamically for an array of 10 int?

► new int(10) ;

► new int[10] ;

► int new(10) ;

► int new[10];

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

The prototype of friend functions must be written _____ the class and its definition must be written _____

► inside, inside the class

► inside, outside the class

► outside, inside the class

► outside, outside the class

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

Like member functions, _____ can also access the private data members of a class.

► Non-member functions

► Friend functions

► Any function outside class

► None of the given options

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

To perform manipulation with input/output, we have to include _____ header file.

► iostream.h

► stdlib.h

► iomanip.h

► fstream.h

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

The **endl** and **flush** are _____

► Functions

► Operators

► Manipulators

► Objects

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

If we want to use stream insertion and extraction operators with _____ then we have to overload these operators.

► int, float, double

► objects of class

► int, float, object

► int, char, float

Question No: 22   (Marks: 1) - Please choose one

The static data members of a class can be accessed by _____

► only class

► only objects

► both class and objects

► none of given options

Question No: 23   (Marks: 1) - Please choose one

Classes defined inside other classes are called _____ classes

► looped

► nested

► overloaded

► none of the given options.

Question No: 24   (Marks: 1) - Please choose one

Which value is returned by the destructor of a class?

► A pointer to the class.

► An object of the class.

► A status code determining whether the class was destructed correctly

► Destructors do not return a value.

Question No: 25   (Marks: 1) - Please choose one

Consider the following code segment

class M {

  friend int operator!(const M &);

...

};

  !s   // code of line implies that   operator!(s)

  ...

Let assume if s is an object of the class then function is implemented as _____

► Member function

► Non-member function

► Binary operator function

► None of the given options

Question No: 26   (Marks: 1) - Please choose one

When the compiler overloads the assignment (=) operator by default then _____

► compiler does member wise assignment.

► compiler does not allow default overload of assignment (=) operator

► member of the class are not assigned properly

► None of the given options

Question No: 27   (Marks: 1) - Please choose one

If **text** is a pointer of class **String** then what is meant by the following statement?

text = new String [5];

► Creates an array of 5 string objects statically

► Creates an array of 5 string objects dynamically

► Creates an array of pointers to string

► Creates a string Object

Question No: 28   (Marks: 1) - Please choose one

Static variable which is defined in a function is initialized _____.

▶ Only once during its life time

▶ Every time the function call

▶ Compile time of the program

▶ None of the above

Question No: 29   (Marks: 1) - Please choose one

The appropriate data type to store the number of rows and colums of the matrix is_____.

▶ float

▶ int

► char

► none of the given options.

Question No: 30   (Marks: 1) - Please choose one

Copy constructor becomes necessary while dealing with _____allocation in the class.

► Dynamic memory

► Static memory

► Both Dynamic and Static memory

► None of the given options

Question No: 31   (Marks: 1)

What is drawback of writing the definitions of all the functions before main function?

Question No: 32   (Marks: 1)

How do we provide the default values of function parameters?

Question No: 33   (Marks: 2)

What is difference between endl and \n?

Question No: 34   (Marks: 2)

When does an object get destroyed?

Question No: 35   (Marks: 3)

What is the difference between structure and class?

Question No: 36   (Marks: 3)

What will be the output of following functions if we call these functions three times?

1)

void func1(){

int x = 0;

x++;

cout << x << endl;

}

2)

void func2(){

static int x = 0 ;

x++;

cout << x << endl ;

}

Question No: 37   (Marks: 3)

Why stream insertion and stream extraction operators cannot be overloaded as member functions?

Question No: 38   (Marks: 5)

What is difference between Unary and binary operators and how they can be overloaded?

Question No: 39   (Marks: 5)

What steps we must follow to design good program?

Question No: 40   (Marks: 10)

Write the program that inputs an **octal** number from the user and then display the entered octal number into **hexadecimal** number using **manipulators** (parameter-less, parameterized) and **member function** of input/output streams.

Question No: 41   (Marks: 10)

Develop a class **Vector** having two data members; x and y.

The class should also provide the following Overloaded operator capabilities.

a) Overload the addition operator(+) to add two **Vectors**

b) Overload the assignment operator(=) to assign **Resultant Vector**

c) Write function **Display()** to display   x, y coordinates

Note: Addition of vector Let suppose there are two vectors A and B with their x, y coordinates.

FINALTERM EXAMINATION

Spring 2010

CS201- Introduction to Programming

Ref No: xxxxxxx

Time: 90 min

Marks: 58

Student Info	
Student ID:	bcxxxxxxxxx
Center:	OPKST
Exam Date:	09-08-2001

For Teacher's Use Only

Q No.	1	2	3	4	5	6	7	8	Total
Marks									
Q No.	9	10	11	12	13	14	15	16	
Marks									
Q No.	17	18	19	20	21	22	23	24	
Marks									
Q No.	25	26	27	28	29	30	31	32	
Marks									
Q No.	33	34	35	36					
Marks									

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

In if structure the block of statements is executed only,

▶When the condition is false

▶When it contain arithmetic operators

▶When it contain logical operators

▶When the condition is true

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

Header file: **fstream.h** includes the definition of the stream classes _____.

▶ifstream, fstream, cout

▶ifstream, fstream, ofstream

►fstream, cin, cout

►None of the above

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

To access the data members of structure _____ is used.

►dot operator (.)

►* operator

►▯ operator

►None of given.

Question No: 4   http://vustudents.ning.com   (Marks: 1) - Please choose one

---

eof( ), bad( ), good( ), clear( ) all are manipulators.

▶True

▶False

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

Which kind of functions can access private member variables of a class?

▶Friend functions of the class

▶Private member functions of the class

▶Public member functions of the class

▶Friend, private and public functions

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

The return type of operator function must always be void.

▶True

▶False

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

Friend function of a class is _____ .

▶Member function

►Non-member function

►Private function

►Public function

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

Function implementation of friend function must be defined outside the class.

►True

►False

Question No: 9   (Marks: 1) http://vustudents.ning.com- Please choose one

The normal source of **cin** object is,

►File

►Disk

►Keyboard

►RAM

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

Which of the following is correct way to initialize a variable x of int type with value 10?

►int x ; x = 10;

►int x = 10;

► int x, x = 10;

► x = 10;

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

Consider the following code segment. What will be the output of the following program?

int func(int) ;

int num = 10 ;

int main(){

int num ;

num = 5 ;

cout << num ;

cout << func(num) ;

}

int func(int x){

return num ;

}

►5, 5

►10, 5

►5, 10

►10, 10

Question No: 12   (Marks: 1) -http://vustudents.ning.com Please choose one

With template function, the compiler automatically detects the passed data and generates a new copy of function using passed data.

►True

►False

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

What will be the correct syntax to declare two-dimensional array of float data type?

▶float arr{2}{2} ;

▶float arr[2][2] ;

▶float arr[2,2] ;

▶float[2][2] arr ;

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

The first parameter of operator function for << operator,

►Must be passed by value

►Must be passed by reference

►Can be passed by value or reference

►Must be object of class

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

Heap is constantly changing in size.

►True

►False

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

While calling function, the arguments are assigned to the parameters from _____.

▶left to right.

▶right to left

▶no specific order is followed

▶none of the given options.

Question No: 17   (Marks: 1) http://vustudents.ning.com - Please choose one

Classes defined inside other classes are called _____ classes

▶looped

▶nested

▶overloaded

►none of the given options.

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

If we define an identifier with the statement **#define PI 3.1415926** then during the execution of the program the value of PI _____.

►can not be replaced

►None of the given options

►Remain constant.

►can be changed by some operation

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

Which value is returned by the destructor of a class?

►A pointer to the class.

►An object of the class.

►A status code determining whether the class was destructed correctly

►Destructors do not return a value.

Question No: 20   (Marks: 1) http://vustudents.ning.com- Please choose one

Every class contains _____.

►Constructor

►Destructor

►Both a constructor and a destructor

►None of the given options

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

A template function must have

►One or more than one arguments

►Only one argument

►Zero arguments

►None of the given options

Question No: 22   (Marks: 1) - Please choose one

Structured Query Language is used for _____http://vustudents.ning.com

►Databases Management

►Networks

►Writing Operating System

►none of the given options

Question No: 23   (Marks: 1) - Please choose one

When a call to a user-defined function finishes, the variable defined inside the function is still in existence.

►True

►False

Question No: 24   (Marks: 1) - Please choose one

The precedence of an operator can be changed through operator overloading.

►True

►False

Question No: 25   (Marks: 1) - Please choose one

A Matrix can be composed of ints, floats or doubles as their elements. Best way is to handle this , _____ http://vustudents.ning.com

►Write a separate class to handle each

►Use templates

►Use strings to store all types

►None of the given options

Question No: 26   (Marks: 1) - Please choose one

"delete" operator is used to return memory to free store, which is allocated by the "**new"** operator.

►True

►False

Question No: 27   (Marks: 2)

What is the difference between **switch** statement and **if** statement.

Question No: 28   (Marks: 2)

How can we initialize data members of contained object at construction time?

Question No: 29   (Marks: 2)

How the data members of a class are initialized with meaningful values?

Question No: 30   (Marks: 2)

Can we overload *new* and *delete* operators?

Question No: 31   (Marks: 3)

What will be the output of following functions if we call these functions three times?

1)

```
void func1(){

int x = 0;

x++;

cout << x << endl;

}
```

2)

```
void func2(){

static int x = 0 ;

x++;

cout << x << endl ;

}
```

Question No: 32   (Marks: 3)

What is the keyword '**this**' and what are the uses of '**this'** pointer?

Question No: 33   (Marks: 3)

Suppose an object of class A is declared as data member of class B.

(i) The constructor of which class will be called first?

(ii) The destructor of which class will be called first?

Question No: 34   (Marks: 5)

Write the general syntax of a class that has one function as a friend of a class along with definition of friend function.

Question No: 35   (Marks: 5)

Write down the disadvantages of the templates. http://vustudents.ning.com

Question No: 36   (Marks: 5)

Write a program which defines five variables which store the salaries of five employees, using setw and setfill manipulators to display all these salaries in a column.

Note: Display all data with in a particular width and the empty space should be filled with character x

Output should be displayed as given below:

xxxxxx1000

xxxxxx1500

xxxxx20000

xxxxx30000

xxxxx60000

FINALTERM EXAMINATION

Spring 2010

CS201- Introduction to Programming

Ref No: 1555950

Time: 90 min

Marks: 58

Student Info	
Student ID:	
Center:	
Exam Date:	

For Teacher's Use Only

Q No.	1	2	3	4	5	6	7	8	Total
Marks									
Q No.	9	10	11	12	13	14	15	16	
Marks									
Q No.	17	18	19	20	21	22	23	24	
Marks									
Q No.	25	26	27	28	29	30	31	32	
Marks									
Q No.	33	34	35	36					
Marks									

Question No: 1 http://vustudents.ning.com **(Marks: 1) - Please choose one**

If it is required to copy an array to another array then,

► Both arrays must be of the same size and data type

► Both arrays may be of different size

► Both arrays may be of different data type

► Both arrays may be of different size and type

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

Dealing with structures and functions passing by reference is the most economical method

► True

► False

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

eof( ), bad( ), good( ), clear( ) all are manipulators.

▶ True

▶ False

Question No: 4   (Marks: 1) http://vustudents.ning.com- Please choose one

Overloaded new operator function takes parameter of type *size_t* and returns

▶ void (nothing)

▶ void pointer

▶ object pointer

► int pointer

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

When new operator is overloaded at global level then corresponding built-in new operator will not be visible to whole of the program.

► True

► False

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

If there is more than one statement in the block of a for loop, which of the following must be placed at the beginning and the ending of the loop block?

► parentheses ( )

► braces { }

► brackets [ ]

► arrows < >

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

The return type of a function that do not return any value must be _____

► float

► int

► void

► double

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

UNIX has been developed in _____ language.

► JAVA

► B

► C

► FORTRAN

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

Like member functions, _____ can also access the private data members of a class.

► Non-member functions

► Friend functions

► Any function outside class

► None of the given options

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

Which of the following statement is best regarding declaration of friend function?

► Friend function must be declared after public keyword.

► Friend function must be declared after private keyword.

► Friend function must be declared at the top within class definition.

► It can be declared anywhere in class as these are not affected by the public and private keywords.

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

The operator function overloaded for an Assignment operator (=) must be

► Non-member function of class

► Member function of class

► Friend function of class

► None of the given options

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

The **endl** and **flush** are _____

► Functions

► Operators

► Manipulators

► Objects

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

If a symbolic constant has been defined, it will be an error to define it again.

► True

► False

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

The operator used for casting, in C, is standard _____ operator.

► none of the given options.

► cast

► cost

► const

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

Constructors can not be overloaded like ordinary functions.

► True

► False

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

Which of the following function call is correct for the function prototype?

defaultParameters (int a, int b = 7, char z = '*');

► defaultParameters (5);

► defaultParameters (5, '8');

► defaultParameters (6, '#');

► defaultParameters (0, 0, '*', 0);

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

When an operator function is defined as member function for a binary Plus (+) operator then the number of argument it take is/are.

► Zero

► One

► Two

► N arguments

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

We can not define a variable of user-defined data type in the class.

► True

► False

Question No: 19   http://vustudents.ning.com (Marks: 1) - Please choose one

When an object of a class is defined inside an other class then,

► Constructor of enclosing class will be called first

► Constructor of inner object will be called first

► Constructor and Destructor will be called simultaneously

► None of the given options

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

The appropriate data type to store the number of rows and colums of the matrix is_____.

► float

► int

► char

► none of the given options.

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

Class is a user defined_____.

► data type

► memory referee

► value

► none of the given options.

Question No: 22   (Marks: 1) - Please choose one

A pointer variable can be,

► Decremented

► Incremented

► Multiplied

► Both Decremented and Decremented

Question No: 23   (Marks: 1) - Please choose one

NULL value has been defined in _____ and _____ header files.

► strings.h and iostream.h

► ctype.h and conio.c

► conio.c and conio.h

► stdlib.h and stddef.h

Question No: 24   (Marks: 1) http://vustudents.ning.com- Please choose one

A Matrix can be composed of ints, floats or doubles as their elements. Best way is to handle this , _____

► Write a separate class to handle each

► Use templates

► Use strings to store all types

► None of the given options

Question No: 25   (Marks: 1) - Please choose one

"setprecision" manipulator will set

► The number of digits after the decimal point

► The number of digits before the decimal point

► The number of digits in a number

► None of the given options

Question No: 26   (Marks: 1) - Please choose one

Which of the following option will be true, if we overload "-=" operator?

► only - operator needs to be overloaded

► Minus (-) and = operators need to be overloaded

► the -= operator need to be overloaded explicitly

► the - and = operators need to be overloaded implicitly

Question No: 27   (Marks: 2)

Suppose there is a template function '**func**' having argument of type U and return type T. What will be the C++ syntax to call this function, passing a variable '**x**' of type double and returning an int type?

Question No: 28   (Marks: 2)

Which variable will be used in inner code block if we have the same names of variable at outer code block and inner code block?

Question No: 29   (Marks: 2)

What is the benefit of reference and where can we use it?

Question No: 30   (Marks: 2)

Write the C++ code for the declaration of overloaded stream insertion and stream extraction operator for the object **d** of type **Date**.

Question No: 31   (Marks: 3)

What will be the output of following functions if we call these functions three times?

1)

void func1(){

int x = 0;

x++;

cout << x << endl;

}

2)

void func2(){

static int x = 0 ;

x++;

cout << x << endl ;

}

Question No: 32   (Marks: 3)

If the requested memory is not available in the system then what does **calloc/malloc** and **new** operator return?

Question No: 33   (Marks: 3)

Suppose an object of class A is declared as data member of class B.

(i) The constructor of which class will be called first?

(ii) The destructor of which class will be called first?

Question No: 34   (Marks: 5)

What is difference between Unary and binary operators and how they can be overloaded?

Question No: 35   (Marks: 5)

Suppose we have the following class.

class Matrix

{

private:

int Elements[3][3];

};

Write the operator function of stream extraction operator (>>) for this class.

Question No: 36   (Marks: 5)

What is meant by user interface and class interface in C++ ? And what role a class interface can play in user interface [Marks 5]

FINALTERM EXAMINATION

Spring 2010

CS201- Introduction to Programming

Ref No: 1555950

Time: 90 min

Marks: 58

Student Info	
Student ID:	
Center:	
Exam Date:	

For Teacher's Use Only									
Q No.	1	2	3	4	5	6	7	8	Total
Marks									
Q No.	9	10	11	12	13	14	15	16	

Marks									
Q No.	17	18	19	20	21	22	23	24	
Marks									
Q No.	25	26	27	28	29	30	31	32	
Marks									
Q No.	33	34	35	36					
Marks									

Question No: 1 http://vustudents.ning.com (Marks: 1) - Please choose one

If it is required to copy an array to another array then,

► Both arrays must be of the same size and data type

► Both arrays may be of different size

► Both arrays may be of different data type

► Both arrays may be of different size and type

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

Dealing with structures and functions passing by reference is the most economical method

► True

► False

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

eof( ), bad( ), good( ), clear( ) all are manipulators.

▶ True

▶ False

Question No: 4   (Marks: 1) http://vustudents.ning.com- Please choose one

Overloaded new operator function takes parameter of type *size_t* and returns

▶ void (nothing)

▶ void pointer

▶ object pointer

► int pointer

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

When new operator is overloaded at global level then corresponding built-in new operator will not be visible to whole of the program.

► True

► False

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

If there is more than one statement in the block of a for loop, which of the following must be placed at the beginning and the ending of the loop block?

► parentheses ( )

► braces { }

► brackets [ ]

► arrows < >

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

The return type of a function that do not return any value must be _____

► float

► int

► void

► double

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

UNIX has been developed in _____ language.

► JAVA

► B

► C

► FORTRAN

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

Like member functions, _____ can also access the private data members of a class.

► Non-member functions

► Friend functions

► Any function outside class

► None of the given options

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

Which of the following statement is best regarding declaration of friend function?

► Friend function must be declared after public keyword.

► Friend function must be declared after private keyword.

► Friend function must be declared at the top within class definition.

► It can be declared anywhere in class as these are not affected by the public and private keywords.

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

The operator function overloaded for an Assignment operator (=) must be

http://vustudents.ning.com

► Non-member function of class

► Member function of class

► Friend function of class

► None of the given options

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

The **endl** and **flush** are _____

► Functions

► Operators

► Manipulators

► Objects

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

If a symbolic constant has been defined, it will be an error to define it again.

► True

► False

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

The operator used for casting, in C, is standard _____ operator.

► none of the given options.

► cast

► cost

► const

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

Constructors can not be overloaded like ordinary functions.

► True

► False

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

Which of the following function call is correct for the function prototype?

defaultParameters (int a, int b = 7, char z = '*');

► defaultParameters (5);

► defaultParameters (5, '8');

► defaultParameters (6, '#');

► defaultParameters (0, 0, '*', 0);

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

When an operator function is defined as member function for a binary Plus (+) operator then the number of argument it take is/are.

► Zero

► One

► Two

► N arguments

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

We can not define a variable of user-defined data type in the class.

► True

► False

Question No: 19   http://vustudents.ning.com (Marks: 1) - Please choose one

When an object of a class is defined inside an other class then,

► Constructor of enclosing class will be called first

► Constructor of inner object will be called first

► Constructor and Destructor will be called simultaneously

► None of the given options

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

The appropriate data type to store the number of rows and colums of the matrix is_____.

► float

► int

► char

► none of the given options.

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

Class is a user defined_____.

► data type

► memory referee

► value

► none of the given options.

Question No: 22   (Marks: 1) - Please choose one

A pointer variable can be,

► Decremented

► Incremented

► Multiplied

► Both Decremented and Decremented

Question No: 23   (Marks: 1) - Please choose one

NULL value has been defined in _____ and _____ header files.

► strings.h and iostream.h

► ctype.h and conio.c

► conio.c and conio.h

► stdlib.h and stddef.h

Question No: 24   (Marks: 1) http://vustudents.ning.com- Please choose one

A Matrix can be composed of ints, floats or doubles as their elements. Best way is to handle this ,
_____

► Write a separate class to handle each

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What will be the output of following functions if we call these functions three times?

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void func1(){

int x = 0;

x++;

```
cout << x << endl;

}
```

2)

```
void func2(){

static int x = 0 ;

x++;

cout << x << endl ;

}
```

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Suppose we have the following class.

class Matrix

{

private:

int Elements[3][3];

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What is meant by user interface and class interface in C++ ? And what role a class interface can play in user interface [Marks 5]

FINALTERM EXAMINATION

Spring 2010

CS201- Introduction to Programming

Ref No: xxxxxxx

Time: 90 min

Marks: 58

Student Info	
Student ID:	bcxxxxxxxxx
Center:	OPKST
Exam Date:	09-08-2001

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Q No.	1	2	3	4	5	6	7	8	Total
Marks									
Q No.	9	10	11	12	13	14	15	16	
Marks									
Q No.	17	18	19	20	21	22	23	24	
Marks									
Q No.	25	26	27	28	29	30	31	32	
Marks									
Q No.	33	34	35	36					
Marks									

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

In if structure the block of statements is executed only,

▶When the condition is false

▶When it contain arithmetic operators

▶When it contain logical operators

▶When the condition is true

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

Header file: **fstream.h** includes the definition of the stream classes _____.

▶ifstream, fstream, cout

▶ifstream, fstream, ofstream

►fstream, cin, cout

►None of the above

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

To access the data members of structure _____ is used.

►dot operator (.)

►* operator

►▯ operator

►None of given.

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

eof( ), bad( ), good( ), clear( ) all are manipulators.

▶True

▶False

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

Which kind of functions can access private member variables of a class?

▶Friend functions of the class

▶Private member functions of the class

▶Public member functions of the class

▶Friend, private and public functions

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

The return type of operator function must always be void.

▶True

▶False

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

Friend function of a class is _____ .

▶Member function

▶Non-member function

▶Private function

▶Public function

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

Function implementation of friend function must be defined outside the class.

▶True

▶False

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

The normal source of **cin** object is,

► File

► Disk

► Keyboard

► RAM

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

Which of the following is correct way to initialize a variable x of int type with value 10?

► int x ; x = 10;

► int x = 10;

►int x, x = 10;

►x = 10;

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

Consider the following code segment. What will be the output of the following program?

int func(int) ;

int num = 10 ;

int main(){

int num ;

num = 5 ;

cout << num ;

cout << func(num) ;

}

int func(int x){

return num ;

}

►5, 5

►10, 5

►5, 10

►10, 10

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

With template function, the compiler automatically detects the passed data and generates a new copy of function using passed data.

►True

►False

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

What will be the correct syntax to declare two-dimensional array of float data type?

▶float arr{2}{2} ;

▶float arr[2][2] ;

▶float arr[2,2] ;

▶float[2][2] arr ;

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

The first parameter of operator function for << operator,

►Must be passed by value

►Must be passed by reference

►Can be passed by value or reference

►Must be object of class

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

Heap is constantly changing in size.

►True

►False

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

While calling function, the arguments are assigned to the parameters from _____.

▶left to right.

▶right to left

▶no specific order is followed

▶none of the given options.

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

Classes defined inside other classes are called _____ classes

▶looped

▶nested

▶overloaded

▶none of the given options.

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

If we define an identifier with the statement **#define PI 3.1415926** then during the execution of the program the value of PI _____.

▶can not be replaced

▶None of the given options

▶Remain constant.

▶can be changed by some operation

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

Which value is returned by the destructor of a class?

►A pointer to the class.

►An object of the class.

►A status code determining whether the class was destructed correctly

►Destructors do not return a value.

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

Every class contains _____.

►Constructor

►Destructor

►Both a constructor and a destructor

►None of the given options

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

A template function must have

►One or more than one arguments

►Only one argument

►Zero arguments

►None of the given options

Question No: 22   (Marks: 1) - Please choose one

Structured Query Language is used for _____

►Databases Management

►Networks

►Writing Operating System

►none of the given options

Question No: 23   (Marks: 1) - Please choose one

When a call to a user-defined function finishes, the variable defined inside the function is still in existence.

►True

►False

Question No: 24   (Marks: 1) - Please choose one

The precedence of an operator can be changed through operator overloading.

►True

►False

Question No: 25   (Marks: 1) - Please choose one

A Matrix can be composed of ints, floats or doubles as their elements. Best way is to handle this ,
_____

►Write a separate class to handle each

►Use templates

►Use strings to store all types

►None of the given options

Question No: 26   (Marks: 1) - Please choose one

"delete" operator is used to return memory to free store, which is allocated by the "**new"** operator.

►True

►False

Question No: 27   (Marks: 2)

What is the difference between **switch** statement and **if** statement.

Question No: 28   (Marks: 2)

How can we initialize data members of contained object at construction time?

Question No: 29   (Marks: 2)

How the data members of a class are initialized with meaningful values?

Question No: 30   (Marks: 2)

Can we overload **new** and **delete** operators?

Question No: 31   (Marks: 3)

What will be the output of following functions if we call these functions three times?

1)

```
void func1(){

int x = 0;

x++;

cout << x << endl;

}
```

2)

```
void func2(){

static int x = 0 ;

x++;

cout << x << endl ;

}
```

Question No: 32   (Marks: 3)

What is the keyword '**this**' and what are the uses of '**this'** pointer?

Question No: 33   (Marks: 3)

Suppose an object of class A is declared as data member of class B.

(i) The constructor of which class will be called first?

(ii) The destructor of which class will be called first?

Question No: 34   (Marks: 5)

Write the general syntax of a class that has one function as a friend of a class along with definition of friend function.

Question No: 35   (Marks: 5)

Write down the disadvantages of the templates.

Question No: 36   (Marks: 5)

Write a program which defines five variables which store the salaries of five employees, using setw and setfill manipulators to display all these salaries in a column.

Note: Display all data with in a particular width and the empty space should be filled with character x

Output should be displayed as given below:

xxxxxx1000

xxxxxx1500

xxxxx20000

xxxxx30000

xxxxx60000

FINALTERM EXAMINATION

Spring 2010

CS201- Introduction to Programming

Ref No:

Time: 90 min

Marks: 58

Student Info	
Student ID:	
Center:	
Exam Date:	

For Teacher's Use Only

Q No.	1	2	3	4	5	6	7	8	Total
Marks									
Q No.	9	10	11	12	13	14	15	16	
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Marks									
Q No.	25	26	27	28	29	30	31	32	
Marks									
Q No.	33	34	35	36					
Marks									

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

---

*.doc is _____ by type.

.

▶Sequential File

▶Random Access File

▶Data File

▶Record File

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

Which of the following is NOT a preprocessor directive?

▶#error

▶#define

▶#line

▶#ndefine

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

The return type of operator function must always be void.

►True

►False

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

What does **(*this)** represents?

►The current function of the class

►The current pointer of the class

►The current object of the class

►A value of the data member

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

The statement **cin.get ();** is used to,

▶Read a string from keyboard

▶Read a character from keyboard

▶Read a string from file

▶Read a character from file

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

When we do dynamic memory allocation in the constructor of a class, then it is necessary to provide a destructor. http://vustudents.ning.com

►True

►False

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

Overloaded new operator function takes parameter of type *size_t* and returns

►void (nothing)

►void pointer

►object pointer

►int pointer

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

The second parameter of operator functions for << and >> are objects of the class for which we are overloading these operators.

►True

►False

Question No: 9   http://vustudents.ning.com (Marks: 1) - Please choose one

_____ C++ is a case-sensitive language

►True

►False

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

_____ To include code from the library in the program, such as iostream, a directive would be called up using this command.

►#include "iostream.h"

►include <iostream.h>

►include <iostream.h>

►#include <iostream.h>

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

A template function must have only generic data types.

►True

►False

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

Template class can not have static variables.

►True

►False

Question No: 13   http://vustudents.ning.com (Marks: 1) - Please choose one

What will be the correct syntax to assign an array named *arr* of 5 elements to a pointer *ptr*?

► *ptr = arr ;

► ptr = arr ;

► *ptr = arr[5] ;

► ptr = arr[5] ;

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

What will be the correct syntax to access the value of fourth element of an array using pointer ptr?

►ptr[3]

►(ptr+3)

►*(ptr+3)

►Both 1and 3

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

_____ If
most significant bit of un-signed number is 1 then it represents a positive number.

►True

►False

_____ If
there is a symbol (& sign) used with the variable name followed by data type then it refers to _____ and
if & is being used with variable name then it refers to _____.

►Address of variable, reference variable

►Reference variable, value of variable

►Reference variable, address of variable

►Address of variable, value of variable

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

_____ We can also do conditional compilation with preprocessor directives.

►True

►False

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

_____ The default value of a parameter can be provided inside the _____

►function prototype

►function definition

►both function prototype or function definition

►none of the given options.

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

Classes defined inside other classes are called _____ classes

►looped

►nested

►overloaded

►none of the given options.

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

What purpose do classes serve?

▶Data encapsulation

▶Providing a convenient way of modeling real-world objects

▶Simplifying code reuse

▶All of the given options

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

Every class contains _____.

▶Constructor

►Destructor

►Both a constructor and a destructor

►None of the given options

Question No: 22   **(Marks: 1) - Please choose one**

_____ **new** operator is used to allocate memory from the free store during

►Compile Time

►Run Time

►Link Time

►None of the given options

Question No: 23   (Marks: 1) - Please choose one

When an object of a class is defined inside another class then,

►Destructor of enclosing class will be called first

►Destructor of inner object will be called first

►Constructor and Destructor will be called simultaneously

►None of the given options

Question No: 24   (Marks: 1) - Please choose one

It is possible to define a class within another class.

►True

▶False

Question No: 25   (Marks: 1) - Please choose one

_____ New and Delete are also used with _____ and data types as well.

▶Class, Objects

▶Structures, Pointers

▶Both Class and structures

▶None of above

Question No: 26   (Marks: 1) - Please choose one

With New keyword, data types and class members are initialized with meaningful values instead of garbage. http://vustudents.ning.com

▶True

►False

Question No: 27   (Marks: 2)

_____ How
many arguments a Unary Operator take? Can we make a binary operator as unary operator?

Ans: Unary operator takes only one aurgument like i++ or i— (Post increment or post decrement
operators for intergers) or ++i,--i (Pre increment or pre decrement operators for intergers) ,we can not
make Unary operator as binary or binary as Unary operator.

Question No: 28   (Marks: 2)

_____

Which arithmetic operators cannot have a floating point operand?

Ans: http://vustudents.ning.com

Modulus operator

This operator can only be used with integer operands ONLY

Question No: 29   (Marks: 2)

What are manipulators? Give one example.

Ans:

The manipulators are like something that can be inserted into stream, effecting a change in the behavior. For example, if we have a floating point number, say pi (л), and have written it as *float pi = 3.1415926* ; Now there is need of printing the value of pi up to two decimal places i.e. 3.14 . This is a formatting functionality. For this, we have a *manipulator* that tells about width and number of decimal points of a number being printed.

Some manipulators are parameter less. We simply use the name of the manipulator that works. For example, we have been using *endl*, which is actually a manipulator, not data. When we write *cout << endl* ; a new line is output besides flushing the buffer. Actually, it manipulates the output stream.

Question No: 30   (Marks: 2)

Write down piece of code that will declare a matrix of 3x3. And initialize all its locations with 0;

Ans:

int matrix [3] [3] ;

matrix [0] [0] = 0;

matrix [0] [1] = 0;

matrix [0] [2] = 0;

matrix [1] [0] = 0;

matrix [1] [2] = 0;

matrix [1] [2] = 0;

matrix [2] [0] = 0;

matrix [2] [1] = 0;

matrix [2] [2] = 0;

we can also do it as given below

```
int matrix [3][3] = { 0 }; //all elements 0
```

Question No: 31   (Marks: 3)

Which one (copy constructor or assignment operator) will be called in each of the following code segment?

1)   Matrix m1 (m2);

2)   Matrix m1, m2;

        m1 = m2;

3)   Matrix m1 = m2;

Ans:

1)   Matrix m1 (m2);   **copy constructor**

2)   Matrix m1, m2;

        m1 = m2;   **assignment operator**

3)   Matrix m1 = m2; **assignment operator**

Question No: 32   (Marks: 3)

What will be the output of following function if we call this function by passing int 5?

template <class T>
T reciprocal(T x)
{
return (1/x);
}

Ans:

1/5

Question No: 33   (Marks: 3)

Identify the errors in the following member operator function and also correct them.
http://vustudents.ning.com

math * operator(math m);

math * operator (math m)

{

   math temp;

   temp.number= number * number;

   return number;

}

ANS:

The errors are in the arguments of the member operation function and also in the body of operator member function.

Correct function should be

math *operator(math *m);

math *operator (math *m)

{

   math temp;

   temp = m;

   temp.number= number * number;

   return temp.number;

}

Question No: 34   (Marks: 5)

Write a program which defines three variables of type double which store three different values including decimal points, using setprecision manipulators to print all these values with different number of digits after the decimal number.

Ans:

```cpp
#include <iostream>

#include <iomanip>


int main ()

{

    double x1 = 12345624.72345

    double x2 =  987654.12345

    double x3 =  1985.23456

    cout << setprecision (3) << x1<< endl;

    cout << setprecision (4) << x2 << endl;

    cout << setprecision (5) << x3<< endl;


    return 0;

}
```


Question No: 35   (Marks: 5)

What are the advantages and disadvantages of using templates?

Ans:

Many thing can be possible without using templates but it do offer several clear advantages not offered by any other techniques:

Advanatages:

 • Templates are easier to write than writing several versions of your similar code for different types. You create only one generic version of your class or function instead of manually creating specializations.

• Templates are type-safe. This is because the types that templates act upon are known at compile time, so the compiler can perform type checking before errors occur.

 • Templates can be easier to understand, since they can provide a straightforward way of abstracting type information.

• It help in utilizing compiler optimizations to the extreme. Then of course there is room for misuse of the templates. On one hand they provide an excellent mechanism to create specific type-safe classes from a generic definition with little overhead.

Disadvantages: http://vustudents.ning.com

On the other hand, if misused

• Templates can make code difficult to read and follow depending upon coding style.

• They can present seriously confusing syntactical problems esp. when the code is large and spread over several header and source files.

 • Then, there are times, when templates can "excellently" produce nearly meaningless compiler errors thus requiring extra care to enforce syntactical and other design constraints. A common mistake is the angle bracket problem.

Question No: 36   (Marks: 5)

Suppose a program has a math class having only one data member **number**.

Write the declaration and definition of operator function to overload + operator for the statements of main function.

        math obj1, obj2;

obj2= 10 + obj1 ;

Ans:

#include <iostream.h>

math

{

mth operator + (obj1,obj2)

mth operator + (obj1,obj2)

{

 mth operator + (obj1,obj2)

mth operator + (obj1,obj2)

}

}

………………………………………………………………………………

FINALTERM EXAMINATION

Spring 2010

CS201- Introduction to Programming

Ref No: 1557656

Time: 90 min

Marks: 58

Student Info	
Student ID:	Dc100200028
Center:	OPKST
Exam Date:	12/8/10

For Teacher's Use Only

Q No.	1	2	3	4	5	6	7	8	Total
Marks									
Q No.	9	10	11	12	13	14	15	16	
Marks									
Q No.	17	18	19	20	21	22	23	24	
Marks									
Q No.	25	26	27	28	29	30	31	32	
Marks									
Q No.	33	34	35	36					
Marks									

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

Pointer is a variable which store,

    ▶ Data

    ▶ <mark>Memory Address</mark>

    ▶ Data Type

    ▶ Values

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

All preprocessor directives are started with the symbol_____.

    ▶ *

    ▶ +
+

► @

► #

Within the statement **obj1=obj2;**   *obj1* will call the assignment operator function and *obj2* will be passed as an argument to function.

► True

► False

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

What is the sequence of event(s) when deallocating memory using delete operator?

► Only block of memory is deallocated for objects

► Only destructor is called for objects

► Memory is deallocated first before calling destructor

► Destructor is called first before deallocating memory

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

The second parameter of operator functions for << and >> are objects of the class for which we are overloading these operators. http://vustudents.ning.com

► True

► False

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

To include code from the library in the program, such as iostream, a directive would be called up using this command.

► #include "iostream.h"

► include <iostream.h>

► include <iostream.h>

► #include <iostream.h>

Question No: 7   http://vustudents.ning.com (Marks: 1) - Please choose one

The number 544.53 must be stored in _____ data type.

► int

► short

► float

► char

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

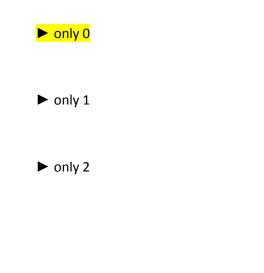A template function can have different type of arguments.

► True

► False

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

For which values of the integer _value will the following code becomes an infinite loop?

int number=1;

while (true) {

        cout << number;

        if (number == 3) break;

        number += integer_value; }

► any number other than 1 or 2

► <mark>only 0</mark>

► only 1

► only 2

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

Template class cannot have static variables. http://vustudents.ning.com

► True

► <mark>False</mark>

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

Which of the following is used with bit manipulation?

► <mark>Signed integer</mark>

► Un-signed integer

► Signed double

► Un-signed double

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

Structure is a collection of _____ under a single name.

► Only Functions

► <mark>Only Variables</mark>

► Both Functions and Variables

► None of the given options

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

Which of the following is the correct C++ syntax to allocate space dynamically for an array of 10 int?

► new int(10) ;

► new int[10] ;

► int new(10) ;

► int new[10];

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

Unary operator implemented as member function takes _____ arguments whereas non-member function takes _____ arguments.

► One, zero

► Zero, one

► One, two

► Two, one

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

The first parameter of overloaded stream insertion operator is _____ where second parameter is _____ http://vustudents.ning.com

► input stream, object of class

► object of class, output stream

► output stream, object of class

► object of class, input stream

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

We can also do conditional compilation with preprocessor directives.

► True

► False

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

If a symbolic constant has been defined, it will be an error to define it again.

► True

► <mark>False</mark>

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

While calling function, the arguments are assigned to the parameters from _____.

► left to right.

► right to left

► <mark>no specific order is followed</mark>

► none of the given options.

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

Classes defined inside other classes are called _____ classes

► looped

► <mark>nested</mark>

► overloaded

► none of the given options.

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

If we define an identifier with the statement **#define PI 3.1415926** then during the execution of the program the value of PI _____.

► cannot be replaced

► None of the given options

► Remain constant.

► <mark>can be changed by some operation</mark>

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

Assignment operator is -------------------------associative. http://vustudents.ning.com

► right

► <mark>left</mark>

► binary

► unary

Question No: 22 (Marks: 1) - Please choose one

If **text** is a pointer of class **String** then what is meant by the following statement?

text = new String [5];

► Creates an array of 5 string objects statically

► Creates an array of 5 string objects dynamically

► Creates an array of pointers to string

► Creates a string Object

Question No: 23   (Marks: 1) - Please choose one

The return type of the operator function for << operator is _____.

► class for which we overload operator

► reference of ostream class (ostream&)

► reference of istream class (istream&)

► void

Question No: 24   (Marks: 1) - Please choose one

The code is written to _____ the program.

► implement

► design

► analysis

► none of the given options.

Question No: 25   (Marks: 1) - Please choose one

Memory allocated at run time is a system resource and it is the responsibility of _____ to de-allocate the memory. http://vustudents.ning.com

► System

► <mark>Programmer</mark>

► User of program

► None of given options

Question No: 26   (Marks: 1) - Please choose one

Templates are not type safe.

► true

Question No: 27   (Marks: 2)

Give the general syntax of class template.

Answer:

Syntax of class template:

template <class T>

 class *class-name*()

{

 definition of class

};

Question No: 28   (Marks: 2)

What is difference between endl and \n?

Answer:

The difference between endl and \n *is that* endl is use to start a new line for the next row

And \n is a new line character.

Question No: 29   (Marks: 2)

What is the **this** pointer? Give an example of its use.

Answer:

This pointer is use to points to the current object in programming.

Question No: 30   (Marks: 2)

Identify each of the following as function call, function definition and function declaration.

1. int func(int num1, int num2);
Function call:

Function ; Function definition: Integer; Function declaration: Num1

and Num2

2. int func(int, int);
    Function call:

Function ; Function definition: Integer; Function declaration: integers

3. func(5, 6) ;

Function call:

Function ; Function definition: numbers; Function declaration: 5&6

4. int func(int num1, int num2){ }
    Function call:

Function ; Function definition: Integer; Function declaration: Num1 and Num2 from

user

Question No: 31   (Marks: 3)

Consider the following code segment. What will be the output of the following code segment?

class class1{

public:

    class class2{

    public:

    class2(){

cout << "Calling default constructor of class2\n" ;

}

};

class1(){

cout << "Calling default constructor of class1\n" ;

}

} ;

main(){

class1::class2 obj1;

class1 obj2 ;

}

Question No: 32   (Marks: 3)

Is it possible to define two functions as given below? Justify your answer.

func(int x, int y)

func(int &x, int &y)

Answer:

No, we cannot define two functions as func(intx, inty) func(int &x, int&y) because it's give an error function not initializing.

Question No: 33   (Marks: 3)

What happens when we use new and delete operator?

Answer:

When we use ***new*** operator to create objects the memory space is allocated for the object and then its constructor is called. Similarly, when we use ***delete*** operator with our objects, the destructor is called for the object before deallocating the storage to the object.

Question No: 34　(Marks: 5)

What is the difference between function overloading and operator overloading?

Answer:

Difference b/w function overloading and operator overloading is:

In function overloading, the functions have the same name but differ either by the number of arguments or the type of the arguments.

Operator overloading is to allow the same operator to be bound to more than one implementation, depending on the types of the operands.

Question No: 35   (Marks: 5)

Why the first parameter of operator function for << operator must be passed by reference?

Answer:

Operator<<'s first parameter must be an ostream passed by reference. Its second parameter, the IntList that is printed, does not have to be passed as a const-reference parameter; however it is more efficient to pass it by reference than by value (since that avoids a call to the copy constructor), and it should not be modified by operator<<, so it should be a const reference parameter

Question No: 36   (Marks: 5)

Read the given below code and explain what task is being performed by this function

Matrix :: Matrix (int row , int col)

{

   numRows = row ;

   numCols = col ;

   elements = new (double *) [numRows] ;

   for (int i = 0 ; i < numRows ; i ++)

```
        {

    elements [ i ] = new double [ numCols ] ;

     for ( int j = 0 ; j < numCols ; j ++ )

          elements [ i ] [ j ] = 0.0 ;

    }

}
```

Hint : This function belong to a matrix class, having

Number of Rows = numRows

Number of Columns = numCols

Answer:

In this code the matrix function is defined, it get the number of rows from the user and create the row of matrix and then get the columns from the user and create the columns. The New is showing for creating more array space for the data which user enters. The elements [i][j] will print the data in matrix form. http://vustudents.ning.com