FINALTERM EXAMINATION
Fall 2008
CS201- Introduction to Programming

Time: 120 min
Marks: 75

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

seekg() and write() are functionally _____ .

- Different
- Identical
- Two names of same function
- None of the above

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

When a pointer is incremented, it actually jumps the number of memory addresses

- ► According to data type
- ► 1 byte exactly
- ► 1 bit exactly
- ► A pointer variable can not be incremented

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

setw is a parameterized manipulator.

- ► True
- ► False

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

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

- ► True
- ► False

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

In functions that return reference, use _____variables.

- ► Local
- ► Global

► Global or static

► None of the given option

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

The declarator of Plus (+) member operator function is

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

► operator Class-Name + ( )

► operator Class-Name + (rhs)

► Class-Name operator + ( )

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

The compiler does not provide a copy constructor if we do not provide it.

► True

► False

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

What is the functionality of the following syntax to delete an array of 5 objects named ***arr*** allocated using new operator?
delete arr ;

- ► Deletes all the objects of array
- ► Deletes one object of array
- ► Do not delete any object
- ► Results into syntax error

Question No: 10 (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: 11 (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: 12 (Marks: 1) - Please choose one

new and **delete** operators cannot be overloaded as member functions.

- True
- False

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

The operator function of << and >> operators are always the member function of a class.

- True
- False

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

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

► Zero

► One

► Two

► Three

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

If we do not mention any *return_value_type* with a function, it will return an _____ value.

► int

► void

► double

► float

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

Suppose a program contains an array declared as **int arr[100];** what will be the size of array?

► 0

► 99

► 100

► 101

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

The name of an array represents address of first location of array element.

► True

► False

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

Reusing the variables in program helps to save the memory

► True

► False

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

Which of the following option is true about new operator to dynamically allocate memory to an object?

► The new operator determines the size of an object

► Allocates memory to object and returns pointer of valid type

► Creates an object and calls the constructor to initialize the object

► All of the given options

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

new and delete are _____ whereas malloc and free are _____.

► Functions, operators

► Classes, operators

► Operators, functions

► Operators, classes

Question No: 21 (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: 22 (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: 23 (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: 24 (Marks: 1) - Please choose one

For non-member operator function, object on left side of the operator may be

- Object of operator class
- Object of different class
- Built-in data type
- All of the given options

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

The operator function will be implemented as _____, if obj1 drive the - operator whereas obj2 is passed as arguments to - operator in the statement given below.
obj3 = obj1 - obj2;

- Member function
- Non-member function
- Friend function
- None of the given options

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

Which one of the following is the declaration of overloaded pre-increment operator implemented as member function?

- Class-name operator +() ;
- Class-name operator +(int) ;
- Class-name operator ++() ;
- Class-name operator ++(int) ;

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

The static data members of a class are initialized _____

- at file scope
- within class definition
- within member function
- within main function

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

Class is a user defined_____.

- data type
- memory referee
- value

► none of the given options.

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

We can also define a user-defines manipulators.

► True

► False

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

Automatic variable are created on _____.

► Heap

► Free store

► static storage

► stack

Question No: 31 (Marks: 1)

How do we provide the default values of function parameters?

Question No: 32 (Marks: 1)

Why do java consider pointer as dangerous

Question No: 33 (Marks: 2)

What is memory leak?

Question No: 34 (Marks: 2)

What does optimization the of code means?

Question No: 35 (Marks: 3)

What is the difference between structure and class?

Question No: 36 (Marks: 3)

See the following code segment.

```
template <class T>
class myclass {
private:
        T x;
public:
        myclass (T a) {
        x = a;
        }
};
```

Write the main function which creates two objects of class for int and double data types.

Question No: 37 (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)

Question No: 38 (Marks: 5)

Write a program using **getline()** member function to inputs a string up to delimiter character comma (,) and then display the string on the screen.

Question No: 39 (Marks: 5)

Do you think that friend functions violate encapsulation? Justify your answer.

Question No: 40 (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.

Question No: 41 (Marks: 10)

Write a small program which defines two user-defined manipulators named **octal** and **hexadecimal**. These manipulators should display the decimal numbers into octal and hexadecimal.
In the main function, input a decimal number from the user and then display this decimal number into octal and hexadecimal using user-define manipulators named **octal** and **hexadecimal**.