



(a) a = 20 b = 300

(b) a = 20 b = 60

(c) a = 20 b = garbage

(d) a = garbage b = 300

4. Constructor is executed when

(a) an object is created

(b) an object is used

(c) a class is declared

(d) an object goes out of scope

5. The class which do not have static data members are known as

(a) simple class

(b) template class

(c) local class

(d) formal class

6. From which of the following class of stream is derived?

(a) istream

(b) ostream

(c) fstreambase

(d) Both (b) and (c)

7. Which of the following access specifier is useful only in inheritance?

(a) private

(b) public

(c) protected

(d) private and public

8. \_\_\_\_\_ is used to achieve run time polymorphism

(a) operator overloading

(b) function overloading

(c) virtual function

(d) virtual base class

9. Which of the following statement is correct?

(a) A try block can have only one catch block

(b) The try block can be followed by multiple catch blocks

(c) The catch block can be followed by multiple try blocks

(d) Multiple catch blocks can be followed by a try block

10. Choose the correct option which gives the current position of get pointer in a file.

(a) seekg( )

(b) seekp( )

(c) tellg( )

(d) tellp( )

#### PART - B (5 x 2 = 10 Marks)

11. Find the error in the following program. Justify it.

```
#include<iostream.h>
class Room
{
    int width, height;
    void setValue(int w, int h)
    {
        width=w;
```

```

        height=h;
    });
void main()
{
    room objRoom;
    objRoom.width=12;}

```

12. List out the operators that cannot be overloaded in C++.
13. When is the catch block skipped?
14. Differentiate cross casting and down casting.
15. List the applications of OOPs.

PART - C (5 x 16 = 80 Marks)

16. (a) (i) Explain the concepts of function overloading with an example. (10)
- (ii) Develop a C++ program to count the number of objects using static member functions. (6)

Or

- (b) (i) Develop a C++ program to represent a class for a bank account which includes the following members: Name of the depositor, account number, type of account, balance amount. Member functions: to assign initial values, to deposit an amount, to withdraw an amount, to display name and balance. (10)
- (ii) Outline the syntax of friend function. (6)
17. (a) (i) Develop a C++ program to add two complex numbers which are passed as an object as arguments with binary operator overloading using friend function. (10)
- (ii) Write short notes on wrapper classes. (6)

Or

- (b) Explain in detail about multiple constructors and dynamic allocation with suitable examples. (16)
18. (a) Apply various mechanisms used in exception handling with suitable examples. (16)

Or

- (b) Explain in detail about function template with suitable example. (16)

19. (a) Identify the need of runtime polymorphism by virtual functions with an appropriate example. (16)

Or

(b) Analyze ambiguity faced in multiple inheritance. How it is being resolved. Explain with an example. (16)

20. (a) (i) Distinguish formatted and unformatted console I/O operations used in C++. (8)

(ii) List out various file mode parameters with an example. (8)

Or

(b) (i) Explain in detail about standard template library. (8)

(ii) Write short notes on namespace. (8)

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