

Practice Questions

1. When you use static data members?
2. What is size of operator?
3. Define this pointer.
4. What are stream class functions in C++ Programming?
5. What is dynamic memory location?
6. Discuss the rules of defining constructors.
7. Why do we need virtual destructors?
8. How do you call a virtual function in base class?
9. Write the use of function overriding.
10. 10. What is initializers list in C++?
11. What is object oriented programming? Explain any five characteristics of object oriented programming languages.
12. Explain public, private and protected access specifiers and show the ambiguity in multiple and multipath inheritance.
13. What do you mean by type conversion? Give an example of basic to object conversion.
14. What is the difference between early binding and late binding in C++?
15. Define Virtual Function. Explain the mechanism of Virtual function.
16. Define Operator Overloading. Explain how to overload unary operator and binary operator.
17. Write a program in C++ that display entered string into reverse order.
18. What are function templates of C++? Discuss the concept of error handling functions supported in C++.
19. Differentiate between a local and a static object.
20. What is the purpose of defining a Destructor function?
21. Explain briefly what is Exception Handling?
22. What are the properties of a static data member?
23. What is the use of Scope resolution operator in C++?
24. What is an Abstract class?
25. What is Visibility mode? What are the different inheritance Visibility modes supported by C++?
26. What is the use of this keyword?
27. What are C++ streams?
28. Explain nested class with the help of an example.
29. What is a class? What is the relation between an object and a class? Write a program which shows how to define a class, how to access member functions and how to create and access objects in C++.
30. Explain with examples the different (Variable) storage classes used in C++.
31. Write a program to get character input from the user and store those characters in a file.
32. With the help of a suitable example, show how to access records randomly in a file.
33. Explain the concept of Virtual and Pure Virtual Functions with the help of examples.
34. What is inheritance? Explain with example how to inherit a class in C++.
35. What is Dynamic Memory Allocation? Explain with the help of an example how to create and destroy objects dynamically.
36. Create a class whose object represents a complex number (A complex number contains a real part and an imaginary part). Write a program so that it is possible to add two objects of this class and store the result in third object.

37. What is a Template? Explain with the help of an example how to create a Function Template and a Class Template.

1. Explain the following:
 - A) Friend function
 - B) Function overloading
 - C) Pre-processor directives
 - D) “const” reference argument in function
 - E) Destructors
 - F) Copy constructor
 - G) Dynamic initialization of variables?
 - H) Member function.
2. What is OOP? What are its major characteristics? How it is different from procedural programming?
3. a) Explicate differences between C++ structure and C++ classes.
b) describe class inheritance and polymorphism with the help of examples.
4. What do you mean by Exception handling? How exceptions are handled in C++ ? Explain with suitable example.
5. a) What is a file? What are various file stream classes?
b) Write a program to read and display contents of a file with eof () function.
6. What do you mean by operator overloading? Overload +operator to concatenate to strings.
7. What do you mean by virtual? What is their importance? Write a program in C++ to show the functioning of virtual functions.
8. write notes on the following with suitable illustration in C++:
 - a) constructor
 - b) Proxy Classes
9. Write notes on the following:
 - a) Dynamic memory allocation
 - b) ‘this’ pointer
- 10 Explain the following:
 - a) Encapsulation
 - b) Abstract Class
 - c) To declare a member of a class ‘static’?

- d) "const" reference argument in function
 - e) File modes and their purpose
 - f) Copy constructor
 - g) Main () function in C++ differ from main () in C?
 - h) Member function
11. In what ways Object oriented paradigm is better than structured programming paradigm? Explain features of OOP's.
12. a) Explicate what features of C++ makes it different from C?
b) What is access specifier? Explain its types.
13. a) What do you mean by Template? Differentiate between class template and function template.
b) What is exception? Give some reasons which cause exception.
14. a) What is a file? Write a program to create, read and write in a sequential access file.
b) What do you mean by library files? Explain their role in C++ with suitable examples.
15. What do you mean by operator overloading? What are various restrictions in operator overloading? Write a program in C++ to overload binary operator.
16. a) Distinguish between the virtual functions and pure various restrictions in operator overloading? Write a program in C++ to overload binary operator.
b) what do you mean by polymorphism? Explain with the help of example how polymorphism is achieved at (i) compile time (ii) run time.
17. What do you mean by dynamic constructor? Write a program to implement dynamic constructor.
18. a) Explain the use of 'this' pointer.
b) What do you mean by Inheritance? Describe its various types.
19. Explain following with suitable examples.
- a) Preprocessor directives
 - b) Access modifiers
 - c) Container Classes and Integrators
 - d) Virtual destructors
 - e) Stream manipulator
20. a) What is object oriented programming? How is it different from the procedural oriented programming?
b) What are the role of namespaces in object oriented programming?
21. a) Differentiate between structure in C++ and classes in C++.
b) Explain the concept of reusability in detail.
c) Write short note on encapsulation.
22. a) What is friend function? What are the merits and demerits of using friend function? Explain with example.
b) What is constructor? Why dynamic initialization of objects is needed? Illustrate with the help of example.
23. a) What is the need of declaring member of class static? Write a program that illustrates the use of static function.
b) Explain dynamic initialization with new () and delete () functions.
24. a) What do you mean by operator over loading? What are various restrictions in operator over loading? WAP in C++ to over load binary operator using member function and friend function.
b) What is the significance of making constructor in a derived class? Explain with example.
25. a) Write short note on the following:
i) Abstract classes and concrete classes.

ii) Function overloading

26. a) What is exception handling? What are the advantages of using exception handling mechanism in a program?
b) What is the basic difference between opening a file using a constructor function and open () function. When one method is preferred over other?
27. a) What is the basic difference between manipulators and ios member function in implementation? Give example.
b) What is generic programming ? How is it implemented in C++ ? A class template is known as a parameterized class comment.
28. Compare and contrast procedural programming and object-oriented programming. Provide examples of languages that are primarily procedural and those that are object-oriented.
29. What are the main advantages of using object-oriented programming over procedural programming?
30. In what scenarios might procedural programming be preferred over object-oriented programming?
31. What is the C++ Standard Library, and why is it important? Give examples of some commonly used components of the C++ Standard Library.