OOPs Interview Qns & Ans Micro CheatBook

1) What is OOPS?
OOPS is abbreviated as Object Oriented Programming system in which programs are considered as a collection of objects. Each object is nothing but an instance of a class.

2) Write basic concepts of OOPS?
Following are the concepts of OOPS:

1. Abstraction
2. Encapsulation
3. Inheritance 4. Polymorphism
5.

3) What is a class?
A class is simply a representation of a type of object. It is the blueprint/plan/template that describes the details of an object.

4) What is an Object?
An object is an instance of a class. It has its own state, behavior, and identity.

5) What is Encapsulation?
Encapsulation is an attribute of an object, and it contains all data which is hidden. That hidden data can be restricted to the members of that class.
Levels are Public, Protected, Private, Internal, and Protected Internal.

6) What is Polymorphism?
Polymorphism is nothing but assigning behavior or value in a subclass to something that was already declared in the main class. Simply, polymorphism takes more than one form.

7) What is Inheritance?
Inheritance is a concept where one class shares the structure and behavior defined in another class. If Inheritance applied to one class is called Single Inheritance, and if it depends on multiple classes, then it is called multiple Inheritance.

8) What are manipulators?
Manipulators are the functions which can be used in conjunction with the insertion (<<) and extraction (>>) operators on an object. Examples are endl and setw.

9) Explain the term constructor
A constructor is a method used to initialize the state of an object, and it gets invoked at the time of object creation. Rules for constructor are:

- Constructor Name should be the same as a class name.
- A constructor must have no return type.

10) Define Destructor?

A destructor is a method which is automatically called when the object is made of scope or destroyed. Destructor name is also same as class name but with the tilde symbol before the name.

11) What is an Inline function?

An inline function is a technique used by the compilers and instructs to insert complete body of the function wherever that function is used in the program source code.

12) What is a virtual function?

A virtual function is a member function of a class, and its functionality can be overridden in its derived class. This function can be implemented by using a keyword called virtual, and it can be given during function declaration.

A virtual function can be declared using a token(virtual) in C++. It can be achieved in C/Python Language by using function pointers or pointers to function.

13) What is a friend function?

A friend function is a friend of a class that is allowed to access to Public, private, or protected data in that same class. If the function is defined outside the class cannot access such information.

A friend can be declared anywhere in the class declaration, and it cannot be affected by access control keywords like private, public, or protected.

14) What is function overloading?

Function overloading is a regular function, but it can perform different tasks. It allows the creation of several methods with the same name which differ from each other by the type of input and output of the function.

15) What is operator overloading?

Operator overloading is a function where different operators are applied and depends on the arguments. Operator,-,* can be used to pass through the function, and it has its own precedence to execute

16) What is an abstract class?

An abstract class is a class which cannot be instantiated. Creation of an object is not possible with an abstract class, but it can be inherited. An abstract class can contain only an Abstract method. Java allows only abstract method in abstract class while other languages allow nonabstract method as well.

17) What is a ternary operator?

The ternary operator is said to be an operator which takes three arguments. Arguments and results are of different data types, and it depends on the function. The ternary operator is also called a conditional operator.

18) What is the use of finalize method?

Finalize method helps to perform cleanup operations on the resources which are not currently used. Finalize method is protected, and it is accessible only through this class or by a derived class.

19) What are the different types of arguments?

A parameter is a variable used during the declaration of the function or subroutine, and arguments are passed to the function body, and it should match with the parameter defined. There are two types of Arguments.

- Call by Value – Value passed will get modified only inside the function, and it returns the same value whatever it is passed into the function.
- Call by Reference – Value passed will get modified in both inside and outside the functions and it returns the same or different value.

20) What is the super keyword?

The super keyword is used to invoke the overridden method, which overrides one of its superclass methods. This keyword allows to access overridden methods and also to access hidden members of the superclass.
It also forwards a call from a constructor, to a constructor in the superclass.

21) What is method overriding?

Method overriding is a feature that allows a subclass to provide the implementation of a method that overrides in the main class. It will override the implementation in the superclass by providing the same method name, same parameter, and same return type.

22) What is an interface?

An interface is a collection of an abstract method. If the class implements an interface, it thereby inherits all the abstract methods of an interface. Java uses Interface to implement multiple inheritances.

23) What is exception handling?

An exception is an event that occurs during the execution of a program. Exceptions can be of any type – Runtime exception, Error exceptions. Those exceptions are adequately handled through exception handling mechanism like try, catch, and throw keywords.

24) What are tokens?

A compiler recognizes a token, and it cannot be broken down into component elements. Keywords, identifiers, constants, string literals, and operators are examples of tokens. Even punctuation characters are also considered as tokens. Example: Brackets, Commas, Braces, and Parentheses.

25) What is the main difference between overloading and overriding?

Overloading is static Binding, whereas Overriding is dynamic Binding. Overloading is nothing but the same method with different arguments, and it may or may not return the equal value in the same class itself.

Overriding is the same method names with the same arguments and return types associated with the class and its child class.