1. **What is class?**

Class is a User defined data type, used to create objects and to define object data types and methods.

We can create many objects for class, object is an instance of a class.

For example,Bicycle is a class then MountainBicycle , SportsBicycle, etc can be considered as objects of the class.

1. **What do you mean by Inheritance?**

Mechanism of deriving new class from the existing class is known as Inheritance.

Existing class is called Base class, Super class, Parent class and the New class is called Derived class, Sub-class, Child class.

1. **What is Inheritance?**

Inheritance is one of the key features of OOP that allows us to create a new class from an existing class. The new class that is created is known as subclass (child or derived class) and the existing class from where the child class is derived is known as superclass (parent or base class).

1. **What are the types of Inheritance?**

In inheritance, there can be three types of inheritance in java: Single, Multilevel and Hierarchical.

In java, Multiple and Hybrid inheritance is not supported, so we can use interface.

1. **What is the use of Static Keyword?**

Static keyword in Java is mainly used for Memory management.

The keyword Static in Java is used to share the same variable or method of a given class. The users can apply static keywords with variables, methods, blocks, and nested classes.

1. **What do you mean by Constructor?**

Constructor is a special member function that is used to initialize objects. Constructor will invoke automatically.

Constructor name is same as the class name. It called when an object of a class is created.

7**. Types of Constructor?**

1. Default Constructor (no parameters)

2. Parameterized Constructor (have parameters)

3. Overloading Constructor (more than one number of parameters)

**8.What are the different ways of creating objects in java?**

There are different ways to create objects in Java Using new keyword, Using new instance, Using clone() method, Using deserialization, Using newInstance() method in constructor class.

**9. What is the use of instanceof operator?**

“instanceof” operator is used totest the object is of a specified type (class or interface). The result of the operation is either true or false. It's also known as type comparison operator because it compares the instance with type.

**10. What are Checked and Unchecked exception?**

Checked exception:

Exceptions are checked at runtime of the program, must be handled either by re-throwing or with a try catch block,

Unchecked exception:

Exceptions are checked at the compile time of the program, it isn't required to be handled.

**11. What are the different types of Checked exception?**

* SQLException
* ClassNotFoundException
* NullPointerException.
* IllegalStateException.
* NumberFormatException

**12. What are the different types of Unchecked exception?**

* ArithmeticException.
* NullPointerException.
* ArrayIndexOutOfBoundsException.
* NumberFormatException

**13. Explain the use of ‘throws’ keyword?**

The “throws” keyword is used to declare the exceptions that can occur during the execution of a program. Any method that can throw exceptions, it is mandatory to use the throws keyword to list the exceptions that can be thrown.

**14. How to create user defined exception?**

User Defined Exception is creating your own exception class and throws that exception using 'throw' keyword. This can be done by extending the class Exception. There is no need to override any of the above methods available in the Exception class, in your derived class.

**15. Explain the finally keyword:**

“finally” is a block of code we use it with the try keyword. It defines code that's always run after the try and any catch block, before the method is completed. The finally block executes an exception is thrown or caught.

**16. What is default value of static word?**

  Default value of Static is “0”.

Default values are same as instance variables.

the default value of the numbers is 0; Booleans is false; and object references is null.

**17. What is interface and its use?**

In java, interface is a reference type. It is similar to class.

It is a collection of abstract methods. A class implements an interface, thereby inheriting the abstract methods of the interface.

**18. What is Marker interface and its lists?**

A marker interface is an interface that has no methodst. It provides run-time type information about objects. A marker interface is also called a tagging interface

java.lang.Cloneable Interface

java.io.Serializable Interface

java.util.EventListener

 java.rmi.Remote

**19. What is Wrapper objects and its types?**

The wrapper class provides the mechanism to convert primitive into object and object into primitive.

Types:

int, char, short, long, byte, float, etc…

**20. What is boxing and unboxing?**

Boxing is the process of converting a value type into object type.

Converting an object of a wrapper type (Integer) to its corresponding primitive (int) value is called unboxing.

**21. Which is cosmic super class for all the java classes?**

 Object class  is cosmic super class for all the java classes

**22. What are the methods of object super class ?**

* public final void notify()
* public final void notifyAll()
* public final void wait()

**23. What is the Uses of this() keyword?**

“ this” is keyword, it refers to the current object in a method or constructor. The most common use of the this keyword is to eliminate the confusion between class attributes and parameters with the same.

**24. What is the Uses of super() keyword?**

Thesuper keyword in java is a reference variable that is used to refer parent class objects. It is used to call superclass methods, and to access the superclass constructor.

**25. What is serialization? How to achieve it?**

Serialization is a mechanism of converting the state of an object into a byte stream. For serializing the object, we call the writeObject() method of ObjectOutputStream class.

**26. What is the use of transient keyword?**

The transient keyword is used to avoid serialization. If any object of a data structure is defined as a transient , then it will not be serialized.

**27. What is shallow cloning? How to achieve it?**

Shallow cloning creates a new instance and copies all the fields of the object to that new instance where both are referencing to the same memory in heap memory. By using clone() method of the object class we can achieve the shallow copy of the object.

**28. What are the properties of HashSet?**

* HashSet stores the elements by using a mechanism called hashing.
* HashSet contains unique elements only.
* HashSet allows null value.
* HashSet class is non synchronized.
* HashSet doesn't maintain the insertion order.
* HashSet is the best approach for search operations.

**29. Explain the comparator and comparable interface.**

Comparable interface compares “this” reference with the object specified and Comparator in Java compares two different class objectsprovided.

If any class implements Comparable interface in Java then collection of that object either List or Array can be sorted automatically by using Collections.

**30. How to convert list to array and vice-versa?**

 Creates an Integer list called myList and initializes it with some values.

Invokes the stream method on myList. This returns a stream. It then invokes the toArray. this method also returns an object array which is then explicitly typecast to an Integer array.

**31. How to achieve inheritance in java?**

In Java, inheritanceis declared using the extends keyword. You declare that one class extends another class by using the extends keyword.

**32. Which collection provides the sorted collection?**

sort() method is present in java. util. Collections class.

It is used to sort the elements present in the specified list of Collection in ascending order.