**1.What are the various access modifiers used in java classes?**

1.public (it can be accessed from any where)

2.protected(it can be accessed from with in package and out side the package using inheritance)

3.private(only with in class)

4.default(only with in package)

**2.What is the purpose of static method and static variable?**

Static keyword is used to share for all objects

When we have to share a single copy of static method or static variable to share among the all the instance of the class we create static methods and static variables

**3.what do you mean by checked Exception ?**

A checked exception is a subclass of Exception

A programmer can deal with exception where can exception can throws

A checked exception can either declare at compile time.

**4.explain between inner class & subclass ?**

An inner class is a class which is nested within the class and it can access by outer class

An inner class can access all the methods and variables of outer class.

A sub class is a class which is inherit from another class is also class super class .

Sub class can access all public and protected methods and fields of a Superclass.

**5.what is a Singleton Class?**

A singleton class can contain only one instance and all the methods and variable can belong to one instance.

The purpose of singleton class is to control the object creation there by limiting a class by just One.

**6.what is final keyword in java?**

A final keyword is used to define an entity that can only be assigned once.

When final is applied with class the class cannot have subclass.

When final is applied with variable ,once instlised the variable value cannot change.

When final is applied with method ,a final method cannot be overridden by subclass.

**7.What are java packages?**

A package is collection of class and interfaces, Which are kept together and has a relitation.

It helps to modelizer the code and kept in a reuse.

Packages can be imported in other class.

**8.Explain between Abstract class and interfaces in java.**

**Abstract class:**

Abstract class can have methods with implemented .

While a class which inherit a Abstract class it may not have implemented methods .

Subclass can extends and implement abstract class .

It can extends only one Abstract class

**Interface in java:**

where as in interface it contains absolute abstraction ,and cannot have any method implemented.

A class which inherit an interface it must be all are implemented methods.

where as subclasses uses implement keyword to implement interface

A class implements multiple interfaces

**9.Can we declare a class Abstract without Abstract method ?**

Yes ,we can have Abstract class without Abstract method as both are independent concepts

Declaring a class with Abstract it cannot be instances on its own and only be subclass.

Declaring a method as Abstract it can be defined in subclass.

However have even one abstract method it must be declared as abstract class otherwise it will give an error.

**10.what is an immutable class?**

An immutable class once the content is declared it cannot be changed.

Immutable object are objects it cannot change there states once constructed.

Immutable class once the objects are created it will automatically Synchronised and thread safe.

**11.how an object is serialized in java?**

Serialization is a meachinsem of converting an object into byte Stream so that the object can be easily saved to persistence storage or stream across the communication link.an object of an class is serialized by implements Serializable interface

**12.when we should we use serialization ?**

Serialization is used when the data is need to be transferred over the network.

We can also save objects state and converted into byte stream using serialization.

**13.when is a constructer of a class is invoked ?**

When a instance of a object is created and memory is allocated for the object

Public class Con

{

Con()

{

System.out.println(“Hello”);

}

Public static void main(string args[])

{

Con c1=new Con();

Con c2=new Con();//here the constructer is invoked two times

}

**14.why strings in java are called as immutable ?**

Once it is created a string object cannot be changed

When we use lot of modifications then we use StringBuffer

**15.why is runnable interface used in java ?**

Runnable interface is used to implementing multithreading Applications

If want to execute a code in separate thread you need to implement runnable interface .whose instance you need to run separate instred of main thread

**16.what are the two ways for implementing multithreading in java ?**

By extending thread class(overriding its run method

By implementing runnable interface

**17.when lot of changes required in data ,which should be preferred-string or StringBuffer ?**

Since String Buffer is Dynamic nature we can change values of StringBuffer objects unlike String

String is immutable

It is always a good chose to choose is stringBuffer is will change when data been change to many times

**18.How is garbage Collection done in java ?**

In java when object is not referenced in any more garbage collector take place the object is destroyed automatically

Java has either System.gc method(); or runtime .gc(); for automatic garbage collection

**19.How object of a class is created when no constructer is defined in a class ?**

Java use default constructer implesitley for object creation and this constucter has no parameters

**20.how can we ensure that a resource isn’t used by multiple threads simultansley?**

Using Sysnchonised keyword we can ensure that only one thread can Share there resource

And other can get control of that thread when it is free

**21.how can we make a copy of java object ?**

Object cloning references to creation of exact copy of an object

We can use clone method of a cloneable interface

**22.What is the benefit of using inheritance ?**

Reusability ,Extensibility ,data hiding ,Overriding

**23 what are the two methods to restrict a class from being inherited in java ?**

By declaring class as Final

By declaring All members of the class as Private

**24.what is the different between Stack and Queue ?**

Stack is based on LastInFirstOut principle

While a Queue is based on FirstInFirstOut

**25.how can we restrict certain variable of a class for getting serialized ?**

By using transient keyword while decleraing variables variables of the class

Public class Trans

{

Private transient tran\_count;// this cannot be serilized

**26.Is this possible to use a default constructer even if an explicit constucter is defined ?**

Default constructer only when no explicit constructor

**27.can we override a method by using same method name and arguments but different return type?**

Method name ,argument and return type must be same