**Question Range: (1-25)**

**Q: What are the four fundamental concepts of java?**

**Abstraction**

**Inheritance**

**Polymorphism**

**Encapsulation**

**Q: Why Java is Object Oriented Programming Language?**

**Java work with object means that every object has its own attribute and its behave exactly same way while it use. In addition to**

**There are four fundamental concept like :**

**Abstraction**

**Inheritance**

**Polymorphism**

**Encapsulation**

**Q: Why java is platform independent language?**

**Platform independence means that we can write and compile the java code in one platform (eg Windows) and can execute the class in any other supported platform eg (Linux,Solaris,etc) because of JVM which actually helps to do that..**

**Q: Why Java is not pure object oriented programming language?**

**Java use primitive data type and cannot handle more than one inheritance.**

**Q: What is javac and jvm, jdk jre?**

**Javac means java compiler which compile java code**

**jvm means java virtual machine which execute class file or machine language in order to get result of program**

**JDK means java development kit which helps to build the program**

**JRE means java runtime environment which helps to run project.**

**Q: What is object?**

**Object is an instance of a class.**

**Q: What is Class?**

**Class is a blueprint of its object. It has state and behavior. (by state we mean variable and by behavior we mean method.) its describe state and behavior of that object.**

**Q: What is the base class of all classes?**

**Object is base class of java.**

**Few methods of Object class : finalize(), notify(), notifyAll(), equals(), wait(), wait(x), wait(x, y), getClass(), hashcode()**

**Q: What is the difference between a public and a non-public class?**

**A public class may be accessed outside of its package. A non-public class may not be accessed outside of its package.**

**Q: Can a source file contain more than one class declaration?**

**Yes, a single source file can contain any number of Class declarations but only one of the class can be declared as public.**

**Q: What is variable?**

**Variable is name of memory location.example:int a (variable name)=5;**

**Q: What is local and global variable?**

**Local variable: Local variables are declared in methods, constructors, or blocks. Global variable declared outside the method inside the class. Global variable also known as Instance variable.**

**Q: What is datatype?**

**Data type is a set of data with having predefined characteristics. Data type also gives some space in memory.**

**There are two kinds of data type:**

**1: Primitive**

**Ex: byte, short, Int, long, float, double,character, boolean.**

**2: Referenced / Non-primitive:**

**Ex: Any built in class or interface and any class or interface which we created our self when it use to declare a variable that considered as a referenced data type like: String, Integer are built in class in java**

**Class A {**

**A x;//Here A also referenced data type**

**String s=“ hi”; //here string is built class**

**}**

**Q: How to define a constant variable in Java?**

**The variable should be declared as static and final. So only one copy of the variable exists for all instances of the class and the value can't be changed also.**

**Example:**

**static final int MAX\_LENGTH = 50; is an example for constant.**

**Q: What are wrapper classes?**

**Ans: Java provides specialized classes corresponding to each of the primitive data types. These are called wrapper classes.**

**They are example: Integer, Character, Double, Boolean etc.**

**Q: What is class variable?**

**When global variable declared as a static keyword is called class variable**

**Q: Difference between instance and class variable?**

**When you declare a variable with static keyword in a class level that called class variable.**

**When you declare a variable in a class level without static keyword is called instance variable.**

**Q: What is default value for different data type?**

**int ---à0**

**String -----ànull**

**Boolean --àfalse**

**Double ----à0.0**

**Q: What is the default value of an object reference declared as an instance variable?**

**The default value will be null unless we define it explicitly.**

**Q: What is a transient variable?**

**Transient variable is a variable that may not be serialized.**

**Q: What is System.out.println?**

**Ans: System is a class, out is a variable, print is a method.**

**Q: What is method?**

**Collection of statements which grouped together to perform an operation.**

**Q: Should a main() method be compulsorily declared in all java classes?**

**It is not required for all classes but we need a class with main() method at least once to execute our project.**

**Q: What is the return type of the main() method?**

**Main() method doesn't return anything hence declared void.**

**Q: Why is the main() method declared static?**

**main() is called by the JVM even before the instantiate of the class hence it is declared as static.**

**Question Range: (26-50)**

**Q: What is the argument of main() method?**

**main() method accepts an array of String object as argument.**

**Q: What is a package?**

**Package is a collection of related classes and interfaces.**

**Q: Which package is imported by default?**

**java.lang package is imported by default even without a package declaration.**

**Q: Do I need to import java.lang package any time? Why ?**

**No. It is by default loaded internally by the JVM.**

**Q: What is java.io?**

**Java.io is a package in java where you can get FileInputStream and FileOutputStream etc.**

**Q: What is modifier? How many type of modifier are there and what are those?**

**A modifier is a keyword placed in a class, method or variable declaration that changes how it operates.**

**Modifier are two kinds:**

**1: access modifier: It gives us access level of class, methods, variable. There are some different access level based on package and to create an object or inherited.**

**access modifier are 4 kind.**

**default**

**public**

**protected**

**private**

**Creating an object in same package:**

**public and default protected can access. private cannot access.**

**By inheritance in same package:**

**all access modifier can access except private.**

**By creating an object in different package:**

**Only public is accessible**

**By inheritance in different package:**

**Only public and protected is accessible**

**How to access private variable:**

**By using getter setter method(getter mean read,setter mean write)**

**example:**

**private int a=8;**

**int getA(){**

**return a;**

**}**

**int setA(int x){**

**a=x;**

**return a;**

**}**

**//in class label:**

**in top class only public and default can be used and protected, private is not accessible. But in inner class all access modifier is possible.**

**Non-access modifier:**

**Non access modifier are three kinds:**

**final**

**static**

**abstract**

**Example:**

**Final:**

**If you declare a class as a final, you cannot inheritance but you can create an object. if you declare variable as a final you just can use it but you cannot change. if you declare method as a final you cannot override.**

**static:**

**you cannot declare static in a top class level.**

**if you declare variable as a static that will work with change value and you can access that with class name. if you declare method as a static you can overload that method but you cannot override. You can call that with class name and only can take static property.**

**abstract:**

**If you declare class as abstract, you cannot create object but u can inherit. abstract class can take abstract and non-abstract method.**

**Q: What modifiers may be used with a top-level class?**

**A top-level or regular class may be public, abstract, or final.**

**Q: What does it mean that a method or field is "static"?**

**Static variable means is called class variable.Static variable always work with change value. Static variable u can call with class name means without creating an object. Static methods can be referenced with the name of the class rather than the name of a particular object of the class (though that works too). Static method can be overload but u cannot override.**

**Q: Can a top class declared as private or protected?**

**Not possible. But inner class possible.**

**Q: What is the purpose of declaring a variable as final?**

**A final variable's value can't be changed. final variables should be initialized before using them.**

**Q: What is the impact of declaring a method as final?**

**A method declared as final can't be overridden. A sub-class can't have the same method signature with a different implementation.**

**Q: I don't want my class to be inherited by any other class. What should i do?**

**You have to declared your class as final because final class cannot be inherited.**

**Q: Can you give few examples of final classes defined in Java API?**

**jString, Math are final classes.**

**Q: Let’s say you have a class which implement a interface but class did not implements all methods then is that possible you can create an object of that class?**

**No because regular class cannot take unimplemented methods so that you have to declared that class as abstract. As we know abstract class cannot be instantiated.**

**Q: Can a method inside Interface to be declared as final?**

**No, not possible. Public and abstract are the only applicable modifiers for method declaration in an interface.**

**Q: Can a class be declared as static?**

**We cannot declare top level class as static, but only inner class can be declared static.**

**Example:**

**public class Test**

**{**

**static class InnerClass**

**{**

**//is called inner class**

**}**

**}**

**Q: When will you define a method as static and what is restriction?**

**When a method needs to be accessed even before the creation of the object of the class then we should declare the method as static. A static method should not refer to instance variables without creating an instance and cannot use "this" operator to refer the instance.**

**Q: What is the importance of static variable?**

**static variables are class level variables where all objects of the class refer to the same variable. If one object changes the value then the change gets reflected in all the objects and can be called by class name.**

**Q: Can we declare a static variable inside a method?**

**Static variables are class level variables and they can't be declared inside a method. If declared, the class will not compile.**

**Q: What is an Abstract Class and what is it's purpose?**

**A Class which doesn't provide complete implementation is defined as an abstract class. Abstract classes enforce abstraction and cannot create an object of that class.**

**Q: Can an abstract class be declared final?**

**No**

**Q: What is use of abstract variable?**

**Variables can't be declared as abstract.**

**Q: What is an abstract method?**

**An abstract method is a method which is unimplemented.**

**Q: What is the difference between a static and a non-static inner class?**

**A non-static inner class may have object instances that are associated with instances of the class's outer class. A static inner class does not have any object instances.**

**Q: What is the difference between inner class and nested class?**

**Nested classes are divided into two categories: static and non-static. Nested classes that are declared static are simply called static nested classes. Non-static nested classes are called inner classes.**

***Some people work for the same organisation all their working life. Others think that it is better to work for different organizations. Discuss both these views and give your own opinion.***

With most time of their life being spent in the workplaces, people nowadays tend to attach more importance to job experience. In some people's view, it is of greater benefits to remain in one organisation for work, while others are longing for various job experiences in different places.

Generally, staying in one company or other kind of organisation for a long time means a steady job, which leads to promotions and rise in salaries. It is also a commonplace in a company to notice that those who have worked for a great couple of years will be rewarded more bonus. Besides, being familiar with their work and colleagues, people can establish a rapport with those around them, thus forming a sense of community. Actually, this is also the way in which most genuine friendships are built after one enters the job market.

However, on the other hand, other believe that switching job a a frequent basis has its own appeals. To begin with, it can prevent people from being vexed by working-weariness. Constantly doing different kinds of work, those job-hoppers can always keep the excitement and freshness when first take up something. Moreover, shifting jobs offers people a chance to get acquainted with a number of diversified co-workers. They can also enrich their own knowledge by finding out about how other companies are operated and managed.

Technically if i rationalize the perspective, People have different views about the appropriate environment to work. Some people believe that spending the entire working life in the same group gives more opportunities, meanwhile, others propose working in different workplaces. I personally believe that it is better to work in diverse business groups.

The option to keep working the same organization is better for several reasons. The employees might get familiar with the culture in their current workplace. They are likely to know their colleagues in different departments in the company, so each person can assist each other whenever someone gets in trouble. Besides, the workers can get the promotion based on the time they devote. The longer they work, the more wage they may receive. When considering to be upgraded to a higher position, a person who works longer usually is the first one in a short list.

On the other hand, I believe that it is more beneficial for the employees to change their workplaces. Firstly, it is a challenging experience. After graduating the university, the young people do not have a clear orientation in their mind about working, so they can work in different places to find out whether they can be suitable for the career that they will spend their whole life. For example, working in the multinational companies give them a chance to approach new styles in work. In addition, it seems more comfortable to work in diverse organizations because it is quite boring if the workers use their time in the same business group. Meeting the new people, new friends will extend the relationship.

For the reasons that I mentioned above, it seems to me that the employees will be more successful in their career if they try to work in different places

Although both opinions should be given their own credits, personally, I would suggest that people keep their jobs steady without ceaseless change. It is not so easy to find a decent job in the modern society where competitions are getting increasingly fierce, and people may also find it an arduous process to start from scratch.