Polymorphism - the ability of an object to take on many forms, the same object can behave differently in different situations

Inheritance – a sub class could inherits the fields within parent class, both class has a is-a relationship

Abstraction - highlighting important feature from user’s perspective without showing actual implementation

Encapsulation - protect data from the unauthorized class in a single unit

Aggregation – It represents **Has-A** relationship. It is a  one way relationship.

Composition – Composition is a restricted form of Aggregation in which two entities are highly dependent on each other. Both the entities are dependent on each other

Association – relation between two separate classes which establishes through their Objects. Association can be one-to-one, one-to-many, many-to-one, many-to-many.

What is default class modifier?

The member has no explicit modifier, and they can be accessed within the package

What are the different method access modifiers?

private — can be accessed within the class

default — within the package

public — no restriction

protected — within class/child class or same package

What is the use of a final modifier on a class?

Class can not be extended

What is the use of a final modifier on a method?

Method can not be overridden

Which package is always imported by default?

Object class

Can I import same package/class twice? Will the JVM load the package twice at runtime?

You can import the same package or same class multiple times. Neither compiler nor JVM complains about it. But the JVM will internally load the class only once no matter how many times you import the same class.

Does importing a package imports the sub packages as well? E.g. Does importing com.bob.\* also import com.bob.code.\*?

No you will have to import the subpackages explicitly.

What is a Java package and how is it used?

Basically packages are just like folders, it is container of similar type of classes and interface.

Explain the usage of Java packages.

to avoid class name collision and to keep them in organized manner.

Are the imports checked for validity at compile time?

Difference between Public, Private, Default and Protected ?

private — can be accessed within the class

default — within the package

public — no restriction

protected — within class/child class or same package

 Can we reduce the visibility of the overridden method ?

No, since child class method cannot be more restrictive

 Which access specifier can be used with Class ?

Public and default and protected

 Can we reduce the visibility of the inherited or overridden method ?

No

What will happen if we make the constructor private ?

Only members of your class will be able to create its object. You can only use that constructor within the current class.

 Can we instantiate the object of derived class if parent constructor is protected ?

yes  
 Can we declare an abstract method private ?

no, You cannot have a private abstract method because subclasses can't see private members of a superclass.

What is strictfp keyword and when do you use it?

strictfp is a keyword in the Java programming language that restricts floating-point calculations to ensure portability.

What is instanceOf operator?

The java instanceof operator is used to check whether the object is an instance of the specified type