1. If method in base class is private and if method in derived class is public, can we override?

(A)You cannot override a method from base class which is private because base method signature will not be visible to the derived class.

1. Can we make constructor as private?

(A) Yes, we can create a private constructor. Private constructors are used to serve singleton class. Singleton class are those classes which are restricted to a single object. Private constructors restricts the creation of single object at a time.

1. Can we make constructor as final?

(A) No, we can’t make a constructor as final because final is used for method when we don’t want anyone to override it. Since constructors are never overridden, so there is no use to make it final.

1. What is the purpose of overriding equals and hashcode methods of Object class?

(A) equals and hashCode in Java are two fundamental methods which are declared in Object class and part or core Java library. equals() method is used to [compare Objects](http://javarevisited.blogspot.sg/2011/06/comparator-and-comparable-in-java.html) for equality while hashCode is used to generate an integer code corresponding to thatobject.  
equals method is also used to avoid duplicates on HashSet and other Set implementation and every other place where you need to compare Objects.  
Since [HashMap and Hashtable](http://javarevisited.blogspot.sg/2010/10/difference-between-hashmap-and.html) in Java rely on equals() and hashCode() method for comparing keys and values, so java recommends to override hashcode() and equals() method.

And equals method in Java must follow its contract with hashcode method in Java as stated below.

1) If two objects are equal by equals() method then there hashcode must be same.

2) If two objects are not equal by equals() method then there hashcode could be same or different.