1. **What Are The Rules In Defining A Constructor?**

**Answer :**

* + Constructor name should be same as class name.
  + It should not contain return type.

**It should not contain Non Access Modifiers:**

* + final ,static, abstract, synchronized
  + In it logic return statement with value is not allowed.

**It can have all four accessibility modifiers:**

* + private , public, protected, default
  + It can have parameters

**It can have throws clause:**

* + we can throw exception from constructor.
  + It can have logic, as part of logic it can have all java legal statement except return statement with value.
  + We can not place return in constructor.

1. **Can We Define A Method With Same Name Of Class?**

**Answer :**

Yes, it is allowed to define a method with same class name. No compile time error and no runtime error is raised, but it is not recommended as per coding standards.

1. **If We Place Return Type In Constructor Prototype Will It Leads To Error?**

**Answer :**

No, because compiler and JVM considers it as a method.

1. **How Compiler And Jvm Can Differentiate Constructor And Method Definitions Of Both Have Same Class Name?**

**Answer :**

By using return type , if there is a return type it is considered as a method else it is considered as constructor.

1. **How Compiler And Jvm Can Differentiate Constructor And Method Invocations Of Both Have Same Class Name?**

**Answer :**

By using new keyword, if new keyword is used in calling then constructor is executed else method is executed.

1. **Why Return Type Is Not Allowed For Constructor?**

**Answer :**

As there is a possibility to define a method with same class name , return type is not allowed to constructor to differentiate constructor block from method block.

1. **Why Constructor Name Is Same As Class Name?**

**Answer :**

* + Every class object is created using the same new keyword , so it must have information about the class to which it must create object .
  + For this reason constructor name should be same as class name.

1. **Can We Declare Constructor As Private?**

**Answer :**

* + Yes we can declare constructor as private.
  + All four access modifiers are allowed to constructor.
  + We should declare constructor as private for not to allow user to create object from outside of our class.
  + Basically we will declare private constructor in Singleton design pattern.
  + Read more at Can we create private constructor in java

1. **Is Constructor Definition Is Mandatory In Class?**

**Answer :**

No, it is optional . If we do not define a constructor compiler will define a default constructor.

1. **Why Compiler Given Constructor Is Called As Default Constructor?**

Answer :

Because it obtain all its default properties from its class.

They are:

* + Its accessibility modifier is same as its class accessibility modifier
  + Its name is same as class name.
  + Its does not have parameters and logic.

1. **What Is Default Accessibility Modifier Of Default Constructor?**

Answer :

It is assigned from its class.

1. **When Compiler Provides Default Constructor?**

Answer :

Only if there is no explicit constructor defined by developer.

1. **When Developer Must Provide Constructor Explicitly?**

Answer :

If we want do execute some logic at the time of object creation, that logic may be object initialization logic or some other useful logic.

1. **If Class Has Explicit Constructor , Will It Has Default Constructor?**

Answer :

No. compiler places default constructor only if there is no explicit constructor.