**Basic Questions:**

What is the difference between a function and a method?

Ans: A method is a function that is written in a class. We do not have the functions in java; instead we have the methods.

What is the difference between constructors and normal methods?

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| Constructors | Methods |
| A constructor is used to initialize the instance variables of a class | A method is used for any general purpose processing or calculations. |
| A Constructor’s name and class name should be same. | A method’s name and class name can be same or different. |
| A constructor is called at the time of creation of an object. | A method can be called after creating the object. |
| A constructor is only once per object. | A method can be called several times on the object. |
| A constructor is called and executed automatically. | A method is executed only when we call it. |

**Can constructors be parameterized?**

**Ans: Yes, Constructor can be parameterized; the main purpose of constructor is to initialize the values at the time of creation of an object.**

**What is constructor overloading?**

**Ans: Writing two or more constructors with the same name but with the difference in the parameters is called constructor overloading.**

**What is method overloading?**

**Ans: Method overloading means, keeping the method name same and change in the signature is called method overloading.**

**Change in the signature means:**

* **Either change in the number of parameters.**
* **Change in the sequence of parameters.**
* **Change in the data type.**

**Why the main() method be public static void main(String[] args)?**

**Ans:**

**1)** The keyword **public** indicates that the method can be called by any object.

2) The **void** keyword when used as the return type for any Java methods indicates that the method does not **return** anything.

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

4) The argument String indicates the argument type which is given at the command line and arg is an array for string given during command line.

**What is method overriding?**

**Ans: Writing two or more methods in super and sub classes such that the methods have same name and same signature – is called method overriding.**

**Can you declare a class as private?**

**Ans: No, if we declare a class as private, then it is not available to java compiler and hence a compiler error occurs. But inner classes can be declared as private.**

**Is constructor overriding is possible?**

**Ans: No not possible.**

**What is method Overloading and Method overriding?**

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| **Method Overloading** | **Method Overriding** |
| **Writing two or more methods with the same name but with different signature is called method overloading.** | **Writing two or more methods with the same name and same signatures is called method overriding.** |
| **Method overloading is done in same class.** | **Method overriding is done in super and sub-classes.** |
| **In method overloading, method return type can be same or different.** | **In method overriding, method return types should also be same.** |

**What is pass by value and pass by reference?**

**Ans:** Pass By Reference means the passing the address itself rather than passing the value. Passby Value means passing a copy of the value to be passed.

**What** is the purpose of garbage collection in Java, and when is it used?

**A:** The purpose of garbage collection is to identify and discard objects that are no longer needed by a program so that their resources can be reclaimed and reused. A Java object is subject to garbage collection when it becomes unreachable to the program in which it is used.