**1)  What are new features which got introduced in Java 8?**

There are lots of new features which were added in Java 8. Here is the list of important features:

* [Lambda Expression](https://java2blog.com/lambda-expressions-in-java-8/)
* [Stream API](https://java2blog.com/java-8-stream)
* [Default methods in the interface](https://java2blog.com/interface-default-methods-in-java-8/)
* [Functional Interface](https://java2blog.com/java-8-functional-interface-example/)
* [Optional](https://java2blog.com/java-8-optional/)
* [Method reference](https://java2blog.com/java-8-method-reference/)
* Date API
* Nashorn, JavaScript Engine

## 3) What is lambda expression?

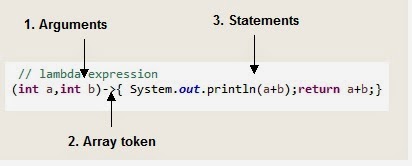
Lambda expression is anonymous function which have set of parameters and a lambda (->) and a function body .You can call it function without name.

#### Structure of Lambda Expressions

|  |  |
| --- | --- |
| 1  2  3  4 | (Argument List) ->{expression;} or  (Argument List) ->{statements;} |

## 4) Can you explain the syntax of Lambda expression?

So we can divide structure of Lambda expression to three parts:

[](https://www.java2blog.com/wp-content/uploads/2017/09/lambdaExpressionExample-4.jpg)

**1. Argument list or parameters**

## 5) What are functional interfaces?

Functional interfaces are those interfaces which can have only one abstract method.It can have static method, default methods or can override Object’s class methods.

There are many functional interfaces already present in java such as Comparable, Runnable.

## 7) Can you create your own functional interface?

Yes, you can create your own functional interface. Java can implicitly identify functional interface but you can also annotate it with @FunctionalInterface.  
Example:  
Create interface named "Printable" as below

## 8) What is method reference in java 8?

[Method reference](https://java2blog.com/java-8-method-reference/) is used refer method of functional interface. It is nothing but compact way of lambda expression.You can simply replace lambda expression with method reference.  
**Syntax:**  
class::methodname

## 9) What is Optional? Why and how can you use it?

Java 8 has introduced new class Called Optional. This class is basically introduced to avoid NullPointerException in java.  
Optional class encapsulates optional value which is either present or not.  
It is a wrapper around object and can be use to avoid NullPointerExceptions.

## 10) What are defaults methods?

Default method are those methods in interface which have body and use default keywords.Default method are introduced in Java 8 mainly because of backward compatibility.

## 11) What is the difference between Predicate and Function?

Both are functional interfaces.  
[Predicate](https://www.java2blog.com/java-8-predicate-examples/)<T> is single argument function and either it returns true or false.This can be used as the assignment target for a lambda expression or method reference.

Function<T,R> is also single argument function but it returns an Object.Here T denotes type of input to the function and R denotes type of Result.

This can also be used as the assignment target for a lambda expre

## 15) Do we have PermGen in Java 8? Are you aware of MetaSpace?

Until Java 7, JVM used an area called PermGen to store classes. It got removed in Java 8 and replaced by MetaSpace.  
Major advantage of MetaSpace over permgen:  
PermGen was fixed in term of mazimum size and can not grow dynamically but Metaspace can grow dynamically and do not have any size constraint.





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