What are the differences between class and object?

Class	Object
It is a logical entity.	It is a real-world entity.
It is conceptual.	It is real.
It binds data and methods together into a single unit.	It is just like a variable of a class.
It does not occupy space in the memory.	It occupies space in the memory.
It is a data type that represents the blueprint of an object.	It is an instance of the class.
It is declared once.	Multiple objects can be declared as and when required.
It uses the keyword class when declared.	It uses the new keyword to create an object.
A class can exist without any object.	Objects cannot exist without a class.

What are the key differences between class and structure?

Class	Structure
Class is a group of common objects that shares common properties.	The structure is a collection of different data types.
It deals with data members and member functions.	It deals with data members only.
It supports inheritance.	It does not support inheritance.
Member variables cannot be initialized directly.	Member variables can be initialized directly.
It is of type reference.	It is of a type value.
It's members are private by default.	It's members are public by default.
The keyword class defines a class.	The keyword struct defines a structure.
An instance of a class is an object.	An instance of a structure is a structure variable.
Useful while dealing with the complex data structure.	Useful while dealing with the small data structure.

What are the differences between the constructor and the method in Java?

Constructor	Method
Constructor has the same name as the class name.	The method name and class name are not the same.

It is a special type of method that is used to initialize an object of its class.	It is a set of instructions that can be invoked at any point in a program.
It creates an instance of a class.	It is used to execute Java code.
It is invoked implicitly when we create an object of the class.	It gets executed when we explicitly called it.
It cannot be inherited by the subclass.	It can be inherited by the subclass.
It does not have any return type.	It must have a return type.
It cannot be overridden in Java.	It can be overridden in Java.
It cannot be declared as static.	It can be declared as static.
Java compiler automatically provides a default constructor.	Java compiler does not provide any method by default.

17) How does procedural programming be different from OOP differ?

Procedural Oriented Programming	Object-Oriented Programming
It is based on functions.	It is based on real-world objects.
It follows a top-down approach.	It follows a bottom-up approach.
It is less secure because there is no proper way to hide data.	It provides more security.
Data is visible to the whole program.	It encapsulates the data.
Reuse of code is not allowed.	The code can be reused.
Modification and extension of code are not easy.	We can easily modify and extend code.
Examples of POP are C, VB, FORTRAN, Pascal, etc.	Examples of OOPs are C++, Java, C#, .NET, etc.

18) What are the differences between error and exception?

Basis of Comparison	Exception	Error
Recoverable/ Irrecoverable	Exception can be recovered by using the try-catch block.	An error cannot be recovered.
Type	It can be classified into two categories i.e. checked and unchecked.	All errors in Java are unchecked.
Occurrence	It occurs at compile time or run time.	It occurs at run time.
Package	It belongs to java.lang.Exception package.	It belongs to java.lang.Error package.
Known or unknown	Only checked exceptions are known to the compiler.	Errors will not be known to the compiler.
Causes	It is mainly caused by the application itself.	It is mostly caused by the environment in which the application is running.

Example	**Checked Exceptions:** SQLException, IOException **Unchecked Exceptions:** ArrayIndexOutOfBoundException, NullPointerException, ArithmaticException	Java.lang.StackOverFlow, java.lang.OutOfMemoryError