1. Why do we need static keyword in java?

Ans: static keyword is mainly used for memory management. It can be applied with variables, class, methods, blocks. The static keyword is a property of the class, and it is used for constant variables or methods that is same for every instance of the class.

2. What is class loading and how does Java program execute?

Ans: Class loaders are responsible for loading Java classes dynamically to the JVM (Java Virtual Machine) during runtime. They're also part of the JRE (Java Runtime Environment). In class loading process it is divided into 3 phases. (Loading, linking, initialization)

3. Can we mark a local variable as static?

Ans: No, we can not mark local variables as static.

4. Why is the static block executed before the main method in java?

Ans: Static block code executes only once during the class loading. The static blocks always execute first before the main() method in Java because the compiler stores them in memory at the time of class loading and before the object creation.

5. Why is a static method also called a class method?

Ans: A static method is a method that belongs to a class rather than an instance of a class. This means you can call a static method without creating an object of the class. Static methods are sometimes called class methods.

6. What is the use of static block in java?

Ans: static block is used for indicating a member that belongs to a class rather than an instance of a class. It can be accessed without having to create an instance of the class.

7. Difference between static and instance variables.

Ans: Instance variables are created when an object is created with the use of the keyword 'new' and destroyed when the object is destroyed. Static variables are created when the program starts and destroyed when the program stops. Instance variables can be accessed directly by calling the variable name inside the class.

8. Difference between static and non-static members.

Ans: Static variables:

- Static variables are shared among all instances of a class.
- Static variable is like a global variable and is available to all methods.
- Static variable will get memory in method area.
- Inside a static area we can only access the static variables.

Non-static variables:

- Non static variables are specific to that instance of a class.
- Non static variable is like a local variable, and they can be accessed through only instance of a class.
- Non static variables are stored in heap area.