1. What is sql injection, How to resolve the same in Java.

SQL Injection is one of the many vulnerabilities in the web applications. SQL Injection as the name suggests is adding or inserting user input data into a database using query. Through SQL injection a malicious user can obtain unauthorized access to the application and steal data. There are tools like Postman which is used to perform these actions. The best solution to counter this issue is by using PreparedStatement inplace of Statement while executing the query. Tools like SQLMap are also used to avoid the SQL Injection.

2. What is the exception hierarchy?

An event which interrupts the normal flow of code execution/instructions is called exception. In the Exception Hierarchy, there exists a Throwable class which is at the top and it has two subclasses Exception and error. Under those subclasses there are other exceptions and errors included which forms a hierarchy which are organised in a fundamental manner. These exceptions are subdivided into checked and unchecked.

3. How will you decide to choose between interface and abstract?

An interface allows the programmer to define functionality but can't implement. Whereas the abstract class allows to create functionality which the subclasses can implement. In case of interface we can have multiple inheritance. It's ideal to use an interface rather than a class filled with abstract methods.

4. What is the difference between == and equals?

The '==' symbolises the comparison operator and used to check if the address/memory location of the object points to the same location. Whereas, the equals() method is used to compare the values of the object.

5. What is the difference between throw and throws?

The difference between throw and throws are:

1. Point of usage: The throw keyword is used inside a function whereas the throws is used in function signature.
2. Number of exceptions thrown: The throw keyword is used to throw an exception explicitly. The exception can be thrown only once. In the case of throws keyword, multiple exceptions can be declared which are separated by comma.
3. Syntax: The throw keyword is written along with the instance of the Exception. The throws keyword includes class names of Exceptions.
4. Propagation of Exceptions: The throw can only propagate unchecked exceptions. The throws keyword can propagate checked exceptions.

6. What is the use of the toString method?

The toString() method is used to represent an object as a string. It is used to return the string representation of the object.

7. What is immutable in java?

In Java an object is considered to immutable if its state can't be changed after its construction. String objects are immutable.

8. What fails fast in collections mean, how can we resolve it?

Iterators are used in Java to retrieve elements of a collection objects one by one. Fail Fast iterator stops the operation as and when it exposes failures or there is a structural modification and stops the complete operation. This can be avoided by using ConcurrentHashMap and CopyOnWriteArrayList classes. There are other ways but this method is most effective.

9. What is the benefit of string tokenizer ?

The string tokenizer class allows us to split Strings into multiple tokens. A token is returned by taking a substring of the given string.

This helps in performing different operations rather than writing new code.

10.How are String, String Buffer and String Builder different from each other?

The differences between String, String Buffer and String Builder are based on two parameters i.e

1. Mutability: Strings are immutable in nature but StringBuffer and StringBuilder are mutable. This means that Strings can’t be modified whereas StringBuffer and StringBuilder can be modified.
2. Performance: Based on performance String is the slowest and StringBuilder is the fastest with StringBuffer being moderate.