1. final is used to define the constant variables. finally is used at the end of try-catch block to complete the try block if there is no exception. finalize() is used to release resources used by objects before they're removed from the memory. A finalizer can work as the primary mechanism for clean-up operations, or as a safety net when other methods fail.
2. throw is used inside the function and can be used to throw an exception logically. throws is the function signature and is used when the function has some statement that lead to exceptions.
3. checked exception and unchecked exception. The checked exception will be found during compilation time, and we need to fixed it to make it compile successful.
4. An error is a subclass of Throwable that tells that something serious problem is existing and a reasonable Java application should not try to catch that error. Generally, it has been noticed that most of the occurring errors are abnormal conditions and cannot be resolved by normal conditions.
5. true, when we throw an exception, we throw an object.
6. yes, finally block can exist with a try only. because the finally block always executed regardless having exceptions or not.

7. example of try with resource block:

```
try (BufferedReader br =
                new BufferedReader(new FileReader(path))) {
    return br.readLine();
}
```

8. Java garbage collection will remove it from the memory in the next circle of garbage collecting.
9. Yes we can use String values in a switch statement.
10. ArrayList internally uses a dynamic array to store its elements. LinkedList uses Doubly Linked List to store its elements. ArrayList is slow as array manipulation is slower. LinkedList is faster being node based as not much bit shifting required. If we need to modify the list a lot, using LinkedList will be much faster. However, if this is read-only list, using the ArrayList will be suitable.
11. HashMap is non-synchronized. It is not thread-safe and can't be shared between many threads without proper synchronization code whereas Hashtable is synchronized. It is thread-safe and can be shared with many threads. HashMap allows one null key and multiple null values whereas Hashtable doesn't allow any null key or value. hashMap is generally preferred over HashTalbe if thread synchronization is not needed.
12. Static import is a feature introduced in the Java programming language that allows members (fields and methods) which have been scoped within their container class as public static , to be used in Java code without specifying the class in which the field has been defined.
13. a static block is a set of instructions that is run only once when a class is loaded into memory. A static block is also called a static initialization block. This is because it is an option for initializing or setting up the class at run-time.
14. default is used for the end of switch case block, so if there is no case matched, it will execute the statement in default block. "break" is used to jump out of the loop. "continue" is used to skip the rest of line in a loop and jump to the beginning the loop for the next circle. "synchronized" means to only one thread able to access the resource at a time. "strictfp" is used to ensure that floating points operations give the same result on any

platform. As floating points precision may vary from one platform to another. strictfp keyword ensures the consistency across the platforms.

15. create a program to have 2 threads - read and write.