**Q1. What is the difference between an Abstract class and Interface?**

|  |  |
| --- | --- |
| Abstract | Interface |
| 1. “abstract” keyword is used | 1. “Interface” keyword is used |
| 2. It can have both abstract and non-abstract methods. | 2. It can only have abstract methods |
| 3. It can implement Interface and cannot support multiple inheritance | 3. In java, multiple inheritance is supported by using interfaces |

**Q2. What is the difference between checked and unchecked exceptions?**

|  |  |
| --- | --- |
| Checked | Unchecked |
| 1. Checked exceptions occur at compile time | 1. Java compiler does not check these types of exceptions |
| 2. Java compiler checks a checked exception | 2.Java compiler doesn’t check exception |
| 3. These types of exceptions can be handled at the time of compilation | 3. These types of exceptions cannot be a catch or handle at the time of compilation, because they get generated by the mistakes in the program |
| 4. They are the sub-class of the exception class. Here, the JVM needs the exception to catch and handle | 4. They are the sub-class of the Runtime Exception class or Error class. Here, the JVM does not require the exception to catch and handle |
| 5. Eg: FileNotFoundException error | 5. Eg: DivideByZero error |

**Q3. Write naming conventions for class, variable, constant?**

Class name always starts with capital letter and It can be a CamelCase and can be Noun as it represent something in real world

Eg: class Mobile

Variable name always starts with small letter and it should represent what value of the variable

Eg: String firstName , int CustomerName

Constant names should be uppercase

Eg: static final int MAX\_HEIGHT

**Q4. What is method overriding?**

If subclass or child class has the same method as declared in the parent class it is known as method overriding in Java

Method overriding is used to provide the specific implementation of a method which is already provided by its superclass

Method overriding is used for runtime polymorphism

**Q5. What is the role of constructor?**

The constructor is same as method. The property of the constructor is that it should have the same name as the class name

It should not have a return type. It is not required to call the constructor manually. It calls itself during the instantiation automatically

The reason to use constructor is that it informs about dependencies

**Q6. What is the difference between HashMap and Linked HashMap?**

In HashMap, the elements are not ordered i.e randomly the elements are ordered.

HashMap<> name=new HashMap<>();

In Linked HashMap the elements are ordered on key specific order like value based on the key.It has unique values.

LinkedHashMap<> name=new LinkedHashMap<>()

**Q7. What is String immutability?**

String immutable means it cannot be changed or its value cannot be modified by Programmer. Used to secure the string variables in the program.

**Q8. What is Garbage Collection?**

Garbage Collection is process of reclaiming the runtime unused memory automatically. In other words, it is a way to destroy the unused objects

It makes java memory efficient because garbage collector removes the unreferenced objects from heap memory

It is automatically done by the garbage collector(a part of JVM) so we don't need to make extra efforts

**Q9. What is the use of try-with-resources in Exception Handling?**

In Java the try-with-resources statement is a try statement that declares one or more resources. The resource is as an object that must be closed after finishing the program. The try-with-resources statement ensures that each resource is closed at the end of the statement execution.

You can pass any object that implements java.lang.AutoCloseable, which includes all objects which implement java.io.Closeable.

**Q10. What is the limitation of Lambda Expression?**

Lambda expressions can only contain one statement

Lambda functions themselves lack names and documentation, meaning that the only way to know what they do is to read the code