1. Was sind abstrakte Klassen und abstrakte Methoden und was sind deren Eigenschaften? Wie unterscheiden sich abstrakte von nicht – abstrakten Klassen?

An abstract class is a class that cannot be instantiated, but you can inherit from them. You can only use public and private modifiers for fields and methods. It can have abstract methods; these methods are declared without an implementation.

2. Kann eine abstrakte Klasse neben dem Default-Konstruktor auch weitere Konstruktoren definieren?

Yes, so the subclasses can use that constructor.

3. Was passiert mit einer vererbten abstrakten Methode?

You need to implement the method in the subclass, because the abstract superclass just declares without an implementation.

4. Wie lässt sich die Sichtbarkeit von Variablen und Methoden einer Klasse steuern? Welche vier Stufen sind hier möglich (private, public, etc.)?

**Private:**

It is only visible in that class.

**Default (no modifier):**

It is visible in that class and in the same package.

**Protected**

It is visible in that class, in the same package and in classes that inherit from that class.

**Public**

It is visible everywhere.

5. Was sind Interfaces und wie werden diese definiert?

They get initiated via the keyword interface instead of class. It specifies the methods that must be in the classes that inherit from the Interface. There are no implementations whatsoever, there are only method declarations and constants. To use an interface, we need to use the implement keyword.

6. Welche Variablen und Methoden können Interfaces definieren?

Only constants and method declarations.

7. Wie unterscheiden sich Interfaces, abstrakte und nicht-abstrakte Klassen insbesondere auch in Hinblick auf die mögliche Sichtbarkeit ihrer Methoden und Variablen.

Interfaces don’t implement methods; they just declare them. They can only have constant attributes. They can have static methods which are implemented.

Abstract Classes can have a constructor, fields and abstract methods. They implement all but the abstract methods. They can have static methods which are implemented.

Classes have a constructor, fields and methods. They implement all of them.

The interfaces and abstract classes are public at default. You can only give them public or private modifiers. Normal classes can have all four modifiers.