1. What is Encapsulation in Java? Why is it called data hiding?
   Answer: Encapsulation is a core concept in Object-Oriented Programming and refers to the practice of bundling data and methods that operate on that data within a single unit, or object.

2. What are the important features of Encapsulation?
   Encapsulation is one of the fundamental concepts in object-oriented programming (OOP). The key features of encapsulation include:

   Data Abstraction: Encapsulation provides a way to hide the implementation details of a class and exposes only the necessary information to the outside world. This helps to maintain the integrity of the data and reduces the chances of data corruption.

   Data Encapsulation: Encapsulation involves wrapping data and functions within a single unit or object. This helps to protect the data from external access or modification and ensures that the data can only be accessed or modified through the object's methods.

   Modularity: Encapsulation promotes modular design, as it allows you to group related data and behavior into a single unit. This makes your code easier to understand, maintain, and test.

   Reusability: Encapsulation makes it possible to reuse code by creating objects that can be used in multiple contexts. This can significantly reduce the amount of code you need to write and improve the maintainability of your code.

   Information Hiding: Encapsulation allows you to hide the internal details of an object and control the way it interacts with the rest of the system. This helps to improve the security of your code, as you can prevent unauthorized access to sensitive data.

   Increased Flexibility: Encapsulation allows you to make changes to the internal workings of an object without affecting the rest of the system. This makes your code more flexible and easier to modify over time.

   In conclusion, encapsulation helps to improve the overall quality of your code by promoting good software design practices, reducing the complexity of your code, and improving the maintainability and reusability of your code.

5. What is the advantage of Encapsulation?
   Answer: The main advantages of encapsulation are:
   a. Data Hiding: Encapsulation helps to hide the inter details of a class from other objects so that the implementation of the class can be changed without affecting the other objects.
   b. Increased Security: By keeping the data private, encapsulation helps to prevent unauthorized access to the data, making the system more secure.

c. Improved Maintainability: Encapsulation makes it easier to main the code since changes to the implementation can be made without affecting the other parts of the system.
d. Better Organization: Encapsulation makes the code easier to understand and organize since the data and the methods that operate on that data are kept together in one place.

6. How to achieve Encapsulation in Java? Give an Example.
Answer: In Java encapsulation is achieved by declaring the instance variables of a class as private and providing public getter and setter methods to access and modify these variables. This protects the data from external access or modification while allowing controlled access through the methods.

Here is an example:

```
public class EncapsulationExample {
        private int age;
        private String name;

        public int getAge() {
                return age;
        }

        public void setAge(int age) {
                this.age = age;
        }

        public String getName() {
                return name;
        }

        public void setName(String name) {
                this.name = name;
        }
}
```