

**Q1. What is Encapsulation in Java? Why is it called Data Hiding?**

**A1. Encapsulation is Defined as Binding of data and corresponding functions into single unit. Data Hiding is a mechanism used to hide the data implementation details while exposing the data abstraction to the outside world.**

**Q2. What are the important features of Encapsulation?**

**A2. (i) Hiding Data.      (ii) More Flexibility      (iii) Easy to Reuse.**

**Q3. What are getter and setter methods in Java? Explain with an example.**

**A3. Getter Methods are used to get the value from the instance variables of the class.**

**Setter Methods are used to set the value to the instance variables of the class.**

**Eg. Class Student{**

```
    private String name;

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

    Public String getName(){
        return name;
    }
}
```

**Class Main{**

```
    public static void main(String[] args){
        Student std = new Student();
        std.setName("Vishesh");
        System.out.println("Name is :- "+std.getName());
    }
}
```

**Q4. What is the use of this keyword explain with an Example.**

**A4. this Keyword is used to to eliminate the confusion between class attributes and parameters with the same name.**

**Eg. Class Student{**

```
    private String name;

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

**Q5. What is the advantage of Encapsulation?**

**A5. (a) We can achieve security.**

**(b) Enhancement becomes easy.**

**(c) Maintainability and modularisation becomes easy.**

**(d) It provides flexibility to the user to use the system very easily.**

**Q6. How to achieve encapsulation in Java? Give an Example.**

**A6. Encapsulation can be achieved by Declaring all the variables in the class as private and writing public methods in the class to set and get the values of variables.**

**Eg. Class Student{**

**private String name;**

**public void setName(String name){**

**this.name = name;**

**}**

**Public String getName(){**

**return name;**

**}**

**}**

**Class Main{**

**public static void main(String[] args){**

**Student std = new Student();**

**std.setName("Vishesh");**

**System.out.println("Name is :- "+std.getName());**

**}**

**}**