**1.Given a class named Patient, identify what instance methods could be written in this class.**

Ans: An object is created using a class is said to be an instance of that class.We will sometimes say that the object belongs to the class.The methods(subroutines) that the object contains are called instance methods.

There are two types of Instance methods

1.Accessor Method(Getters)

2.Mutator Methods(Setters)

The accessor method is used to make the code more secure and increase its protection level,accessor is also known as a getter.For the convenience of the program,getter starts with the word “get” followed by the variable name.

The mutator method is also known as the setter.It sets the value for any variable which is used in the programs of a class and starts with the word “set” followed by the variable name.

The instance methods could be getName() & setName() ,getAge() & setAge(),getFee() & setFee(), getRoomno() & setRoomno() etc.

By using setName(),setAge(),setFee() & setRoomno() we can input the data and by using getName(),getAge(),getFee() and getRoomno() we can show the inputed values.

**2.Given a class named CPU, identify the public & private instance members.**

Ans: Private members can not be accessed or viewed from the outside classes.The member methods or data members declared as private are accessible only within the classes they are declared.In the case of CPU, Private members can be alu,cache,mar,mdr,cir,clock ,bus etc.

Public means they can be accessed and modified from outside classes.A class , method or variable can be declared as public and it means that it is accessible from any class.In the case of CPU,  Public members can be drive,port,microphonejack,button etc.

**3.Given a class named Media, assume there are 3 objects of this class. Identify the static members of this class.**

**Ans:**We can define class members static using “static” keyword.When we declare a member of a class as static it means no matter how many objects of the class are created,there is only one copy of the static member.

A static member shared by all objects of the class.All static data is initialized to zero when the first object is created,if no other initialization is present.

In the case of media ,the static members can be graphic,audio,video files and java applets etc.

**4.Given a class named Calculator & its derived classes named Standard and Scientific, identify the method which can be overridden by the derived classes.**

**Ans:**If the class name is Calculator and the derived classes would be standard and scientific,then the overridden methods can be addition,multiplication,division,subtraction etc.Because in the case of scientific we can override these functions and as well as some additional functions like logarithmic,sine,cosine ,tangent functions etc.

And in the case of standard calculator functions can be exponential,square roots,logarithmic,trigonometry etc.

**5.Given the classes Bird, Superman, Aeroplane and Missile, identify the usage of interfaces here.**

**Ans:**All the classes that is bird,superman,Aeroplane and missile have the same characteristics of flying but there way of flying may be different.So we can create the interface fly but its definition would be different for every clases.