**1.Given an entity named Television, identify its attributes and explain how will you do Abstraction?**

**Television attributes are**

It’s Width and Height, colour, type (Smart TV or CRT TV), etc. And the Behaviour can be – we can change the channel, adjust volumes and settings, switch off, switch on, etc are lots of behaviour are there. The operation on the behaviour will affect the properties. Changing the channel will affect its property.

We all have been watching TVs. If We want to watch a movie, we watch it on a particular channel by changing channel by remote or type the channel number. we really do not worry about what all the processing happening inside the tv. We are not interested in knowing the internal implementation. We only have been provided an interface and a remote to interact

with that and simply ask for the work. the internal implementations and processing will not know by the user, and they are hidden inside so the internal implementation we don’t need to know. So that is the Abstraction.

**2.Given an entity named Hospital, explain Encapsulation with respect to it.**

the notion of encapsulation (or OOP Encapsulation) refers to the bundling of data, along with the methods that operate on that data, into a single unit. If we consider hospital as class as we know that class is an example of encapsulation.in the hospital classes the properties of a hospital are doctor, patient, receptionist, nurses, portal of hospital, ICU UNIT, Operation Unit, General Wards and Behaviours are Taking the details of a patient, treating a patient inside A operation theatre or in ICU Unit and Billing the Money of a patient etc. So, this how hospital is encapsulated.

**3. Given an entity named Traffic Signal, explain Polymorphism with respect to it.**

The meaning of polymorphism is that being objects in many forms and also doing a same function in different ways. if we take traffic signal as an example the traffic signal has three colors like red, green, yellow here color is in three forms and functioning three tasks where we know red color signal is to stop the vehicles and green is to go in directed direction and yellow color is to get ready to move in shown direction. this way traffic signal is in different forms.

This is polymorphism shown by traffic signal.

**4.Given an entity named Broad Band Connection, explain inheritance with respect to it.**

The main parent of broad band connection is the servers which provides internet. there are many protocols that are followed by internet layers. that protocols are also accessed by the broad band connection. this way the broad band connection which is high speed internet connection inherits the properties of internet servers.

**5.Given an entity named Mobile Phone, identify its static & dynamic attributes.**

Mobile phone has many static and dynamic properties

Static attributes are like in built apps and mobile operating software that cannot be changed.

There are many dynamic attributes like many apps we can download from google paly store.

Password can be changed that also a dynamic property. The camera can’t be changed by user that’s a static property