**OOPS ASSIGNMENT DAY 2**

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

Ans) Entity: Television

Attributes: Screen, Speaker, LEDs, circuit, Wires

A television consists of several attributes. Every attribute has its application in a television. In abstraction all the internal components are hidden and only the required component is displayed, so in the same way, television has all the attributes hidden and the output is shown via screen.

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

Ans) Entity: Hospital

Attributes: Doctor, Patient, nurses, equipment

An hospital is run by many people that includes doctors, nurses, workers etc. Every single one of them is necessary to be under one roof to run an hospital. Just like encapsulation we only see the hospital building, but it consists of many attributes.

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

Ans) Entity: Traffic signal

Attributes: Red, yellow, green light

A traffic signal is a box that contains red, yellow and green lights. Lights gets switched based on time and sometimes traffic. A traffic light is one component that can convey 3 messages.

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

Ans) Entity: Broadband connection

Attribute: Server, router, optic cables, bandwidth

We get internet that’s provided by servers. Let’s assume it as a parent class. It transfers the data to router, and we reach it via Wi-Fi-modem or LAN cables, so it should be considered as child-class. Here child class(router/Wi-Fi) inherits data from parent class(server).

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

Ans) Static: mobile case, battery, camera, sim

Dynamic: OS, applications, screen