

## Assignment No. 1

~~Winter~~

1) For each of foll activities give poss. description of task in terms of property.

a) Playing Tennis match :-

- Performance : Winning points
- Environment : Tennis Court, opponent
- Actuators : Arms, legs
- Sensors : Eyes, ears

b) Performing High jump :-

- Performance : Height cleared
- Environment : Track
- Actuators : Legs, arms
- Sensors : Eyes, muscles

c) College selection for Engineering

- Performance : Best ranking, fees, placement
- Environment : online, databases, colleges
- Sensors : User preference, rating
- Actuators : Web preference, rating

2) Illustrate real-time example for you kinds of agents

→ a) Simple reflex agent :- Acts based on current precepts  
(EX :- Thermostat)

representation of world  
EX:- self-driving car

c) Goal Based Agent

chooses actions based on desired goals

EX:- Path Finding AI

d) Utility Based Agent

Choose optimal actions for maximum benefit  
(EX:- stock trading bot)

3) Explain how component of agent work with suitable example.

a) Sensors :- sensors are used to collect information  
EX, A robot's camera sees a wall

b) Actuators :- Actuators, performs action  
EX - Robot wheels moves or stop.

c) Perception :- It Understands the situation  
EX:- Robot knows there is wall ahead

d) Decision making :- It choose what to do  
EX:- Robot decides to turn-left.