Assignment 2

Q1] Discuss the role of percept and action in the design of intelligent. How does the interaction between percept and action contribute. to the functionality of an agent ?

⇒ Percepts and action are fundamental of creating a intelligent agents

Percepts

- Percepts are the sensory inputs that an agent receives from its environment
- They represent the agents understanding of it's surrounding, including information about current state of the environment, relevant objects events and changes

Actions

- Actions are the behaviours or operations that an agent can perform in response to it's percepts
- they represent the agent ability to influence or change the state of the environment. based on it's goals, objectives and policy

Interaction between Percepts and actions

① Perception: The agent receives percepts from the environment, providing information about current state.

② Decision making: Based on the received information the agent selects an appropriate action

③ Action execution: the selected action is executed, leading to change in the environment.

④ Feedback : The resulting changes in the environment may generate New percepts.

Q2] Explore different types of environment in which agent operate.

⇒ Following are diff types of environment.

① Fully observable ⇒ Complete information about it's state
② Partialy observable ⇒ limited information about it's state
③ Determinustic ⇒ Unique state leads to a unique state.
④ stochastic ⇒ A state may lead to multiple state
⑤ Episodic ⇒ Current state does not affect future states
⑥ Sequential ⇒ Current state affects future state
⑦ Static ⇒ Environment does not change
⑧ Continuous ⇒ Indefinte stats and achon
⑨ Dynamic ⇒ Environment is not constant
⑩ Discrete ⇒ Finite stats and achons

Examples	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
chess	✓	✗	✓	✗	✓	✗	✓	✗	✗	✓
Automatic car	✗	✓	✗	✗	✗	✓	✗	✓	✓	✓
Crossword puzzle	✓	✗	✓	✗	✗	✗	✓	✗	✗	✓