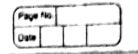
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	Aim :- To understand Tatelligent (AI) system is
	agent act in their environment. An agent is anything
	that can perceive its environment through sensors
ŞA.	and acts upon that environment through effectors.
	This can be clearly seen in figure 1. An agent in
	particular can be:
	Sensors
	Sensors .
1	percepts
	Effects
	Environment
	CHAITOHITIENE
	Actions
	Human agent has sensory organs such as eyes, ears,
	nose, tongue and skin parallel to the sensors,
	and other organs such as hands, legs, mouth
7.	for effectors.
	Robotic agent replaces comeras and infrared range finders
,	and actuators for effectors.
	dira diragnors for Firefold.
	Software agent has encoded bit strings as its programs
	and actions.
-	
	Agent structure can be viewed as a combination of
	Agent architecture and agent Program. Agent Architecture
1	selers to the machinery that an agent executes on whereas
	Agent program is an implementation of an agent

-	tunction Fi			four im	fortant types of
	The state of the s		Sensors		Agent
	. ,		L		a de la constante de la consta
	7		How is the		
	0 1.7		What acti	ons I	Condition - Action
	F ,	. 4	need to a	,	Rula
4630					
		() 5 ₁₁	mple Reflè	x Agent	
	, , ,		Sensors		Agent
			How is	i	How world evolves
	9	4	like nou	ا د ؟	What my action do
-	E E	1 1	Unat a I need 1		Condition-Action Rule
		; ; ;	Effector	5	Care Part Control
	1				j. V.
		b)	Model Bas	red Refl	en Agent

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- A	
	Agent
r	Sensors state
·	How is the world like now? & Now world enoted
	S dupat my action
	what happens if I do action A do
	7 11 22 22 21 21 2
1	what action I need to do? & Groats
-	
· inglian	mailibran E & Effectors
1 12 4 2	
	c) Goal Board Asents
	c) your Based Agent
L	
	Sensors 2 1 11 O State Agent
	Sales
47.50	How is the world (How-world evolves)
	like now?
1	what my action do
	5 - what happens if I K
1 0	# do action A
	E 1 1 2 2 1 2 2 1 2 2 2 2 2 2 2 2 2 2 2
11111 84	
	doing action A
	What action T
	need to do?
e e	
	educad vist hEffectors 1 (d
	d) Utility Based Agent



As seen in above lique a) Simple Reflex agents choosen actions only based on the current percept only. They are rational only it a correct decision is made Only on the bosis of current precept. Agent environment for such agents is fully observable. Model Based Reflex Agents as shown in tig. b use a model of the world to Choose their actions. They maintain an internal state as a pensistent information. Here the model means knowledge about how the things happen in the world that is representation of unobserved aspects of current state depending on percept history. Agent take into account how its actions affect the world. Goal based agents take into account how its actions affect the world. Shown in fig a choose their actions in order to achieve goals Goal-based approach is more flexible than seflex agent since the knowledge supporting a decision is explicitly modeled, thereby allowing for modifications. Goal is the description of desirable situations. Finally, the Utility Bosed Agents shown in hig & choose actions based on a pretorence for each state , Goals are inadequate When there are conflicting goals, but of which only few can be achieved, goals have some uncertainty of being achieved and you need to weigh likelihood of succes against the importance of a goal. On the other hand utility function objectively map how much being in a particular state is desirable.

An AI agent is referred to as Rational Agent. A rational agent always performs right action, where the right action means the action that causes the agent to be most successful in the given percept sequence. The problem the gent solves is characterized by performance measure, Environments, Actuators, and Sonsors-These are collectively

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	referred to as PEAS descriptors for the agent task
· (· : ')	environment. PEAS descriptors provide important insight
. 14.74.4	into agent and the task environment it operates in.
11 - 1	Those insights are very useful in agent design.
	the state of the s
1-1-1-	Another important piece of information is tack
	environment properties while analyzing task environment
· , · · · .	the agent architect needs to ansider tollowing proporties.
	the state of the self and the self and
	Discrete or Continuous: - It there are a limited number
900	of distinct, clearly defined states of the environment
	the environment is discrete ; otherwise it is continuous
	The state of the s
2.1	11 12 130.50 Plant 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	to determine the complete State of the environment of
	each time point from the procepts it is observable; otherwise
.771-5-1-5	it is only partially observable.
	- zwie ze in
3.0	Static or Dynamic it the environment does not change
	while an agent is acting, then it is static; otherwise
	it is dynamic.
Д.	Deterministic or Sequential in In an episodic environment,
-1411	each episode of events consists of the agent perceluing
	and then acting. The quality of its action depends just
	on the episode itself.
	Episodic or Sequential i- It the next state of the
	environment is completely determined by the current state
	and the actions of the agent, then the environment is
- injling	deterministic, otherwise it is non-deterministic.



G.	Single agent or Multiple agents: The environment and contain single agent or other agents which may be of the same or different kind as that of the agent. These agents may be co operating or completing with each other.
П.	Accessible or Inaccessible: If the agent's sensory apparatus can have access to the complete state of the convironment, then the environment is accessible to that agent.
	Working i- Search internet of AI based applications in following scenarios and identify who is agent for that application. Further list out PEAS descriptors for agent environment in each of the case. Finally try to classify task environment proporties like a list of attributes from above list of I task environment proporties.
	1. Autonomous Lunar Rover 2. Deep Blue. Ches's playing computer program 3. Eliza the natural language processing computer program created from 1964 to 1966 at the MIT artificial Intelligence laboratory by Joseph Weizenbuum. 4. Automatic. Partifolio management 5. Sophica is a Social humanoid robot developed by Hung long based company Hanson Robotics. 6. AlphaGo is a computer program that plays the. located game Go. It was developed by Alphabet Inc Deep Mind lab in Landon: 7. Apples virual assistance Siri 8. Endurance: A companion for Dementica Patients.
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	9: Coronal III
A	9: Casper: Helping Insomniacs aret Through the
	Marriel Control
	Grossovers Word Solver
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Resource :- The above diagrams are taken from
7.4	tapic AI - agents and Environments
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	design of the philade in a minaria month
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