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FACULTY OF ENGINEERING

ARTIFICIAL INTELLIGENCE
LECTURE-08

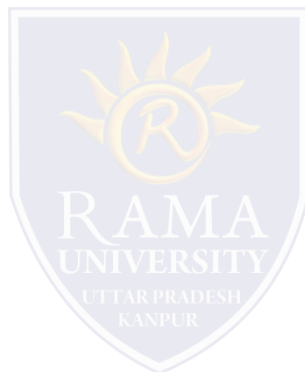
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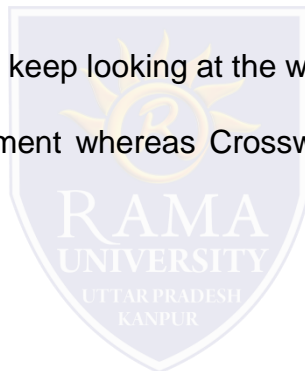
OUTLINE

- ❖ **Episodic vs Sequential**
- ❖ **Static vs Dynamic**
- ❖ **Discrete vs Continuous**
- ❖ **Known vs Unknown**
- ❖ **Accessible vs Inaccessible**
- ❖ **MCQ**
- ❖ **References**



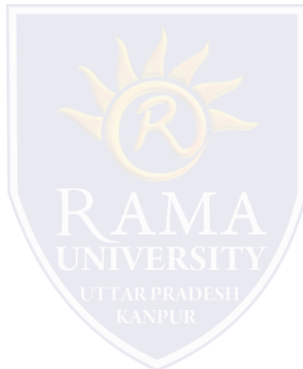
Static vs Dynamic

- If the environment can change itself while an agent is deliberating then such environment is called a dynamic environment else it is called a static environment.
- Static environments are easy to deal because an agent does not need to continue looking at the world while deciding for an action.
- However for dynamic environment, agents need to keep looking at the world at each action.
- Taxi driving is an example of a dynamic environment whereas Crossword puzzles are an example of a static environment.



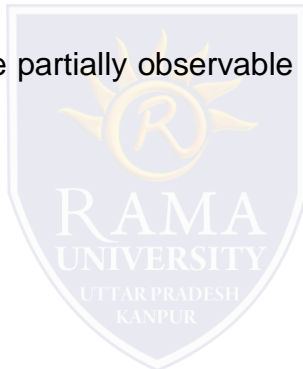
Discrete vs Continuous

- If in an environment there are a finite number of percepts and actions that can be performed within it, then such an environment is called a discrete environment else it is called continuous environment.
- A chess game comes under discrete environment as there is a finite number of moves that can be performed.
- A self-driving car is an example of a continuous environment.



Known vs Unknown

- Known and unknown are not actually a feature of an environment, but it is an agent's state of knowledge to perform an action.
- In a known environment, the results for all actions are known to the agent. While in unknown environment, agent needs to learn how it works in order to perform an action.
- It is quite possible that a known environment to be partially observable and an Unknown environment to be fully observable.



Accessible vs Inaccessible

- If an agent can obtain complete and accurate information about the state's environment, then such an environment is called an Accessible environment else it is called inaccessible.
- An empty room whose state can be defined by its temperature is an example of an accessible environment.
- Information about an event on earth is an example of Inaccessible environment.

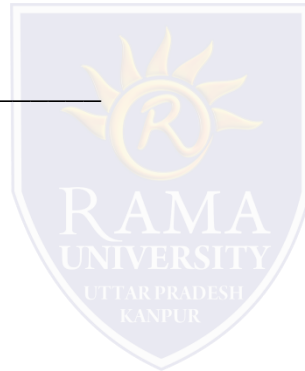


1. A completely automated chess engine (Learn from previous games) is based on?

- a) Strong Artificial Intelligence approach
- b) Weak Artificial Intelligence approach
- c) Cognitive Artificial Intelligence approach
- d) Applied Artificial Intelligence approach

2. A basic line following robot is based on _____

- a) Strong Artificial Intelligence approach
- b) Weak Artificial Intelligence approach
- c) Cognitive Artificial Intelligence approach
- d) Applied Artificial Intelligence approach



3. Which of the following task/tasks Artificial Intelligence could not do yet?

- a) Understand natural language robustly
- b) Web mining
- c) Construction of plans in real time dynamic systems
- d) All of the mentioned

4. What among the following is/are the example of the intelligent agent/agents?

- a) Human
- b) Robot
- c) Autonomous Spacecraft
- d) All of the mentioned

5. When talking to a speech recognition program, the program divides each second of your speech into 100 separate _____

- a) Codes
- b) Phonemes
- c) Samples
- d) Words



References

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