Agent

Quizzes

chapter 2
Define the following agent terms:

Environment:
Sensor:
Actuator:
Percept:
Percept sequence:
Agent Program:
Performance Measure:
PEAS:
Model:
Goal:
Utility:

Fully observable / Partially observable:
Single Agent / Multi-agent:
Deterministic / Stochastic:
Episodic / Sequential:
Static / Dynamic:
Discrete / Continuous:
Known / Unknown:
For adversarial search, we made assumptions about the Environment. What are they?
The search from chapter 3 is limited to certain kinds of Environments. What are the restrictions?

How can non-compliant Environments still be used?
In the vacuum example, how would you classify a world where the suck action picks up all dirt 85% of the time?

What if dust settles out of the air randomly overtime?

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Given an environment description, answer questions regarding the environment characteristics.
Sample Environment/Agent Exam Question

A large field of corn has some of the stalks removed to create a maze. The maze is fully connected (you can get to anywhere from anywhere). An agent has all sensors turned off (blindfolded and earplugs inserted), then is deposited at a random location in the maze. Finally, the sensors are turned on. The agent is given the task of finding the single exit from the maze while traveling as little distance as possible. The agent can look in any direction, but can not see over the corn stalks. The agent can move in any direction, but may not pass through the walls created by corn stalks. The agent left its GPS enabled cell phone at home, but does have a piece of paper and a pencil. Dusk is approaching, so the agent's vision isn't always clear. Sometimes it incorrectly classifies the walls and gaps in its sight.

a) (2) Is this environment fully or partially observable? Why?

b) (2) Is this environment single or multi-agent? Why?

c) (2) Is this environment deterministic or stochastic? Why?

d) (2) Is this environment static or dynamic? Why?

e) (2) Is this environment discrete or continuous? Why?