

CS-171, Intro to A.I., Summer Quarter, 2016 — Quiz # 1 — 20 minutes

NAME: _____

YOUR ID: _____ ID TO RIGHT: _____ ROW: _____ SEAT: _____

1. (48 pts total, 4 pts each) Properties of task environments. For each of the following terms or phrases on the left, write in the letter corresponding to the best answer or the correct definition on the right. The first one is done for you as an example.

A	Agent	A	Perceives environment by sensors, acts by actuators
	Episodic	B	Sensors give complete state of environment at each time point
	Discrete	C	More than one agent in the task environment
	Static	D	Next state is exactly determined by current state and agent action
	Sequential	E	The current decision could affect all future decisions
	Semidynamic	F	Environment can change while the agent is deliberating
	Deterministic	G	Finite number of states, percepts, and actions
	Fully observable	H	The outcomes (or probabilities) for all actions are given
	Uncertain	I	Environment does not change while the agent is deliberating
	Known	J	Environment does not change while the agent is deliberating, but its performance measure does
	Multiagent	K	A series of atomic episodes, each independent of prior agent actions
	Stochastic	L	Next state not exactly determined by current state and agent action
	Dynamic	M	Not fully observable or not deterministic

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2. (48 pts total, 4 pts each) LOGIC CONCEPTS. For each of the following terms on the left, write in the letter corresponding to the best answer or correct definition on the right. **The first one is done for you as an example.**

A	Agent	A	Perceives environment by sensors, acts by actuators.
	Syntax	B	Chain of inference rule conclusions leading to a desired sentence.
	Semantics	C	Specifies all the sentences in a language that are well formed.
	Entailment	D	Describes a sentence that is true in all models.
	Sound	E	Stands for a proposition that can be true or false.
	Complete	F	Represented as a canonical conjunction of disjunctions.
	Propositional Symbol	G	Possible world that assigns TRUE or FALSE to each proposition.
	Valid	H	Describes a sentence that is false in all models.
	Satisfiable	I	Defines truth of each sentence with respect to each possible world.
	Unsatisfiable	J	An inference procedure that derives only entailed sentences.
	Proof	K	An inference procedure that derives all entailed sentences.
	Model	L	The idea that a sentence follows logically from other sentences.
	Conjunctive Normal Form	M	Describes a sentence that is true in some model.

3. (4 pts total, 1 pt each) TASK ENVIRONMENT. Your book defines a task environment as a set of four things, with the acronym PEAS. Fill in the blanks with the names of the PEAS components.

P _____

E _____

A _____

S _____