

Course No: ESED5297
Course Title: Artificial Intelligence
Date: 26/03/2011
No. of Questions: (6)
Time: 1hour
Using Calculator (No)

University of Palestine

Midterm Exam
2nd semester 2010/2011
Total Grade: (20)

Instructor Name: _____
Student No.: _____
Student Name: _____
College Name: _____
Dep. / Specialist: _____
Using Dictionary (No)

First Question (2/20)

Define Artificial Intelligence

Second Question (3/20)

True of False

- a. ____ Steps that can be taken to move toward a goal is called actions.
- b. ____ The set of all states reachable from the initial state by any sequence of actions is called state space.
- c. ____ Any sequence of actions leading from one state to another is called branching factor.
- d. ____ A path from the initial state to a state that satisfies the goal test is called solution.
- e. ____ The number of states (on average) that can be reached from a given state is called a path.
- f. ____ The collection of nodes waiting to be expanded is called fringe or frontier

Third Question (4/20)

Match column One with column two:

S.N.	Column one		Column two	Answer
1	Is the strategy guaranteed to find a solution when there is one?	A	Time complexity	
2	How long does it take to find a solution?	B	Space complexity	
3	How much memory does it need to do the search?	C	Optimality	
4	If there are several solutions, does it find the best one?	D	Completeness	

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Fourth Question

One Branch

(3/20)

Given the environment of you, the agent buying a coffee at a coffee shop, provide a **PAGE** (percepts, actions, goals, environment) description of this kind of an intelligent agent. Characterize the environment as being accessible, deterministic, episodic, static, and continuous or not. What agent architecture is best for this domain?

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Fifth Question

(3/20)

Uninformed (Blind) search has disadvantages. How can we improve the search strategy?

Sixth Question

(5/20)

What are the output of following Prolog statements ?

1) ?- mia = vincent.

2) ?- father(X) = X.

3) ?- k(s(g), Y) = k(X, t(k)).

4) ?- k(s(g), t(k)) = k(X, t(Y)).

5) ?- like(X, X) = like(marsellus, mia).

**End of Questions
Good Luck**