

Quiz 2

Due Apr 25 at 2:10pm	Points 5	Questions 5	Available Apr 25 at 2pm - Apr 25 at 2:10pm 10 minutes
Time Limit 10 Minutes			

Instructions

This quiz is based on uninformed and informed search.

This quiz was locked Apr 25 at 2:10pm.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	8 minutes	3.67 out of 5

Score for this quiz: **3.67** out of 5

Submitted Apr 24 at 10:15am

This attempt took 8 minutes.

Correct!

Question 1

1 / 1 pts

What search method is memory-efficient and guarantees to find optimal solutions?

☐ Bidirectional search

☒ Iterative deepening depth first

☐ Depth first search

☐ Breadth first search

Question 2

1 / 1 pts

What is the time complexity of bidirectional search when the branching factor is b , the diameter of the state space graph is D , and there is a solution of depth d ?

☐ $O(b^D)$

☐ $O(b^{\frac{D}{2}})$

☒ $O(b^{\frac{d}{2}})$

☐ $O(b^d)$

Correct!

Question 3

0 / 1 pts

Which of the following statements is false?

☐ Uniform cost search is a special case of A* search.

☐ A* search with admissible heuristic always finds optimal solutions.

☐ A* search is space efficient.

Correct Answer

You Answered

- ☒ The time complexity of A* search can be as high as breadth first search.

Question 4

1 / 1 pts

Suppose you know that all solutions to a search problem are at the same known depth k . Which of the following search methods is most suitable when you are space-constrained?

- ☐ Breadth first search
- ☐ Depth first search
- ☒ Depth-limited search
- ☐ Iterative deepening depth first

Correct!

Question 5

0.67 / 1 pts

Mark all of the following statements which are true.

- ☐ The cost of the solution for a relaxed problem can never exceed the cost of the original problem.
- ☒ All consistent heuristics are admissible.
- ☒ Consistency entails that the f -values are non-decreasing along any path.
- ☐ All admissible heuristics are consistent.

Correct Answer

Correct!

Correct!

Quiz Score: **3.67** out of 5