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AI lab Test 1

viva.

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section : 5A.

1. what is A* search algorithm?
2. what are the ~~m~~ different methods used to calculate distance approximation heuristically?
3. What is a heuristic function?
4. What are agents? How an agent uses sensors?
5. Why IDS algo is better than other search algo.?
6. Where are IDS and A* algorithm implemented in real life?

Ans 1. A* is a informed search algorithm used in graph traversals and path finding.

Ans 2. ~~He~~ A* Blind search, ~~uninformed search~~ manhattan, euclidean, diagonal etc.

Ans 4. agent observe environment i.e. percepts it through sensors and act accordingly in order to achieve goal.
agent sense environment through sensors.
through ~~agent~~ sensor, it can given state of enviroment.

Ans 3. It helps in finding shortest solutions.
it never overestimates the no. of steps to

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goal.

Ans. 5. IDS is better than other search algo as it uses best of DFS & BFS and uses it to implement i.e.

in DFS we need to traverse till the leaf node has been encountered ~~even tho~~ while in BFS we traverse through entire level even tho we know the loca^ of node

IDS uses algo that traverse through a known depth ; i.e DFS do a limited ; level. and then perform BFS at that level. Hence more effective.

Ans 6. A* used in :- 8 puzzle problem solving.

IDS :- to search shortest path while traveling b/w cities.