AI Lab Test

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5-A

VIVA

Q→1.) What is a* search algorithm?

Q→2.) What are the diff. methods used to calculate distance approximation heuristically?

Q→3.) What is a heuristic function?

Q→4.) What are agents? ~~How an agent uses sensor?~~

Q→5.) How an agent uses sensor?

Q→6.) Why IDS algorithm is better than other search algorithm?

Q→7.) Where are IDS and a* algorithms uses in real life application?

Answers.-

Q→1.) a* search algorithm searches and calculate the shortest distance between the source and destination i.e., from initial state to final state

Q→3.) Heuristic function is a way to inform the search algorithm about the direction to a goal. It provides an informed way to guess which neighbour of a node will lead to a goal.

Q→4.) In AI, agents are entities that acts ~~acts~~ in a manner & in order to achieve desired goals, using sensors.

Q→2.) Different methods to calculate distance heuristically are:-

→ Manhattan distance
→ Euclidean distance.

Q→6.) IDS is different ~~is~~ than other ~~other~~ search algorithms like BFS, DFS as ~~it~~ in every call, DFS is restricted from ~~going~~ going beyond given depth. So, it doesn't require more space and time.

Q→5.) Agents mainly detects the change in environment and ~~sends the inf~~ use the information to achive its ~~destinati~~ goal

Q→7.) IDS can be used in GPS navigation system.

a* used in finding shortest dist b/w two cities

@ayan