

Artificial Intelligence Assignment(Y3)
All questions Mandatory

1. What are the applications of AI?
2. Write the algorithm for Depth-First Search.
3. Can machines think? Explain your reasons both for agreement and disagreement.
4. What is your opinion on the statement –“Machines will have minds.”
5. Is it possible for machines to be intelligent?
6. Discuss one real-world example of utility-based agents in AI.
7. Prove with an example- Search tree is exponentially larger than the graph.
8. Show the working of 4-Queen problem.
9. Find the cost-effective path from initial state to final state using A* algorithm.

2	8	3
1	6	4
7		5

1	2	3
8		4
7	6	5

10. Discuss Mini-Max algorithm with an example (using a graph).
11. Discuss alpha-beta pruning with an example (using a graph).
12. State the difference between uninformed and informed search.
13. You are given two jugs, a 5-litre one and a 7-litre one. Neither has any measuring markers on it. How can you get exactly 6 litres of water into a 7-litre jug.
14. Discuss Hill-Climbing algorithm. State its limitations.
15. Explain the AI knowledge cycle.

****Write the assignments on A4 paper and submit it on or before 28.09.2024. After that no assignments will be accepted.**