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| **Continuous Assessment Test 1- January 2024**  **Model Question** | | | | | | | | |
| Programme | | | : | **B.Tech** | Semester | : | **WIN-2023** | |
| Course | | | : | **Artificial Intelligence** | Code | : | **CSE306L** | |
| Faculty | | | : |  | Slot(s) | : |  | |
| Time | | | : | **1½ Hours** | Max. Marks | : | **50** | |
| **Answer ALL the Questions** | | | | | | | | |
| 1. |  | Suppose you are developing an agent program for medical diagnosis system. Write a suitable agent program and PEAS description of the given system. | | | | | | [10] |
| 2. |  | Draw a search tree for the given initial and goal state of the Tic Tac Toe game. Represent the problem as a state space problem and draw a search tree using suitable action rules.    Initial State Goal State | | | | | | [10] |
| 3. |  | Consider the given graph and find the path to reach from start state S to final state G using iterative deepening Search Algorithm. Discuss the advantages and disadvantages of the algorithm. | | | | | | [10] |
| 4. |  | In the given graph, the numbers written on edges represent the distance between the nodes and the numbers written on nodes represent the heuristic value.   1. Find the most cost-effective path to reach from start state S to final state G using A\* Algorithm. [10 Marks] 2. Find the most cost-effective path to reach from start state S to final state G using Uniform Cost Search Algorithm. [1o Marks] | | | | | | [20] |
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