

April 28, 2021

BCSE Third Year Second Semester 2021

Class Test 1

Artificial Intelligence

Full Marks 30

Time: 1 hour

Answer all questions. Each question carries 3 marks.

State whether the following statements are True or False along with proper explanation/theoretical proof.

1. Turing Test is a one-sided test.
2. Higher time complexity in finding a solution indicates that the solution thus found will be optimal.
3. "Order" of the nodes visited using any search algorithm is only necessary to find out the "path" of the solution.
4. Two lists, OPEN and CLOSED, are necessary for General Graph Search Algorithm.
5. The average time complexity of any search algorithm is exponential in nature.
6. In certain scenario Iterative Broadening search algorithm can outperform Iterative Deepening search.
7. Bidirectional search strategy is applicable to all sorts of problems.
8. When the temperature tends to infinity, Simulated Annealing algorithm boils down to "random" search
9. Genetic algorithm with population size equal to one is a "random" search algorithm
10. Genetic Algorithm without mutation operator may lead to premature convergence.