Indian Institute of Engineering Science and Technology, Shibpur

Department of Computer Science and Technology

Artificial Intelligence Laboratory

Assignment -7 (Do it in Home)

Non-informed and Heuristic Searches

(To be evaluated when the Institute reopens)

- **Implement BFS, DFS and A* Algorithms on 8-puzzle Problem.**
- **Use Prolog or any other Programing Language.**
- **DFS should be depth limited, i. e., maximum depth up to which the search should explore should be specified in advance.**
- **A* Algorithm should employ two separate heuristics: 1) number of tiles mismatch and 2) Manhattan distance.**
- **All searches should return the path from initial state to goal state and total number of nodes searched.**
- **You may take initial state and goal state respectively as follows:**

2	8	3		1	2	3
1	6	4		8	_	4
7	_	5		7	6	5

  Depth limit for DFS= 10