Dr. Mafiseddin Khan.

Roll No:.....

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST - 1 EXAMINATION FEBRUARY 2020

B.Tech VI Semester

COURSE CODE: 18B1WEC533 MAX. MARKS: 15

COURSE NAME: Applied Artificial Intelligence COURSE CREDITS: 03

MAX. TIME: 1 Hr

Note: *All questions are compulsory. Assume the data wherever necessary.*

Q1. Explain problem solving process in Artificial Intelligence with systematic block diagram. Also, describe how search techniques are useful for finding solution to a problem. CO1 [4 Marks]

Q2. (a) Explain the following parameters used for the evaluation of search techniques:

1. Completeness
2. Time and space complexity
3. Optimality CO1[3 Marks]

(b) Based on above three parameters, distinguish between depth first search and breadth first search. CO1 [3 Marks]

Q3. (a) Compute a heuristic function to solve 8 – puzzle problem using hill climbing algorithm for the following example: CO2 [2 Marks]

Start

1	2	3
8	5	6
4	7	

Goal

1	2	3
4	5	6
7	8	

(b) Describe the behavior of simulated annealing algorithm as a modified version of the Steepest Gradient Ascent hill climbing algorithm. CO2 [3 Marks]