

Name: \_\_\_\_\_

Roll No: \_\_\_\_\_

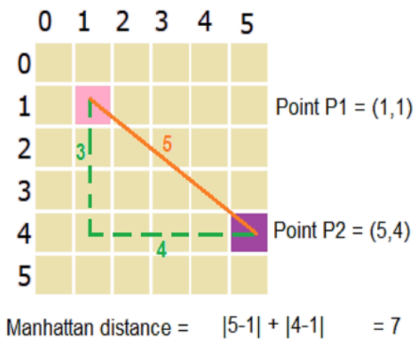
Section: \_\_\_\_\_

## Quiz 02

**QUESTION:** Apply **A\* search** on the maze provided below (figure 01) and build the search tree with the heuristic function provided below. Clearly indicate the order in which each state is expanded with open list (frontier) and closed list (visited nodes) updates. **(Marks:15)**

**$h(n)$**  = Calculate Manhattan distance from current position to each dot and select the minimum distance + Number of remaining dots

**Note:** Manhattan distance will be the number of horizontal and vertical moves without considering the blocked cells.



	D	1	2
A		E	F
B		3	
C	5	4	

Initial State

	D		
A		E	F
B			
C			

Goal State

(Figure 01)

Provide the answer at the back of this page.