Problem 1

Consider the following graph. Find the most cost-effective path from initial state S to reach the goal state I using Best First Search Algorithm.
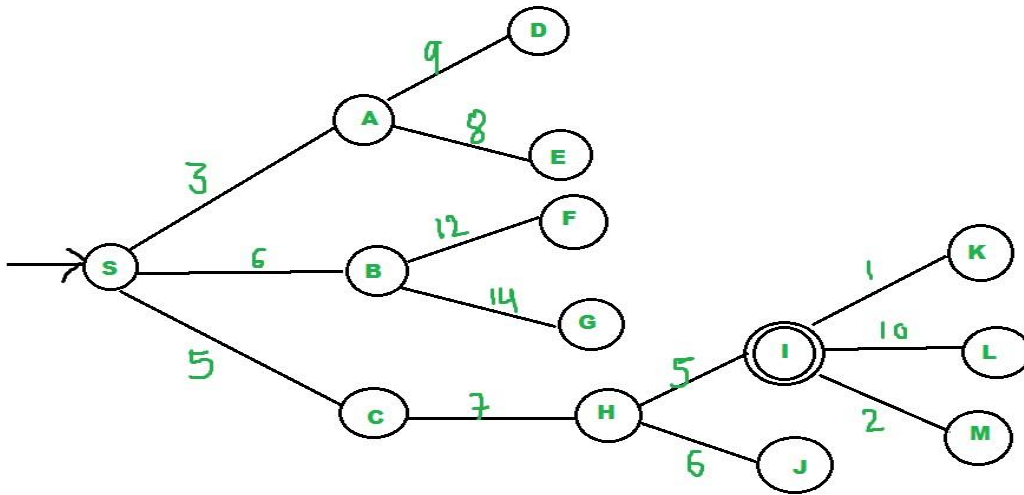
Problem 2

Given an initial state of a 8-puzzle problem and final state to be reached-

2	8	3
1	6	4
7		5

Initial State

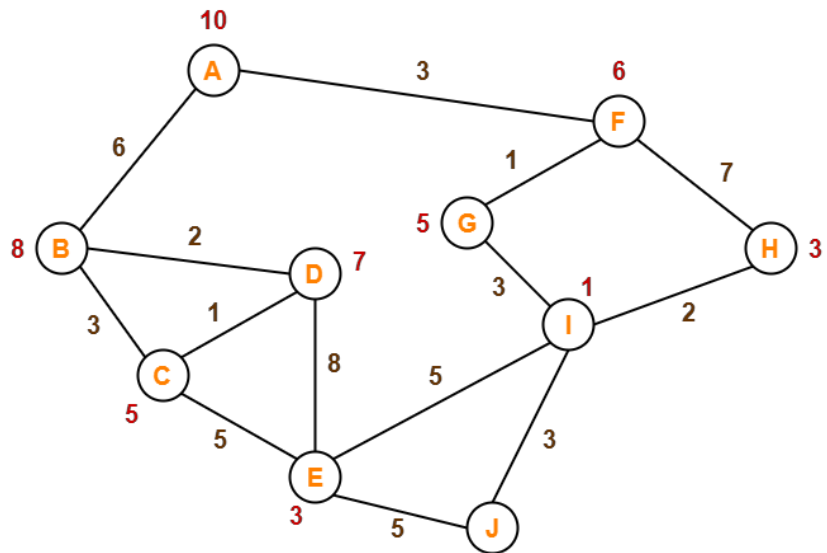| 1	2	3
8		4
7	6	5

Final State

Find the most cost-effective path to reach the final state from initial state using A* Algorithm.

Consider $g(n)$ = Depth of node and $h(n)$ = Number of misplaced tiles.

Problem 3

Consider the following graph

The numbers written on edges represent the distance between the nodes. The numbers written on nodes represent the heuristic value.

Find the most cost-effective path to reach from start state A to final state J using A* Algorithm.