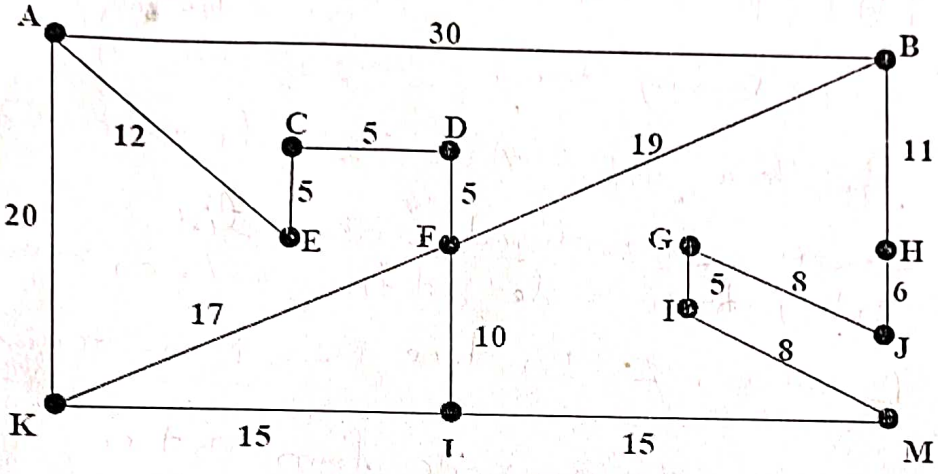
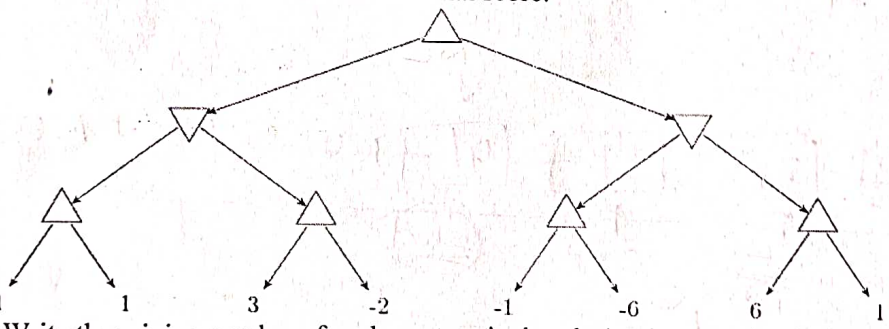
			OR	
	3	5	Use the A* algorithm to work out a route from town A to town M. Use the following cost functions. G(n) = The cost of each move as the distance between each town (shown on map). H(n) = The Straight Line Distance between any town and town M. These distances are given in the table below.  Straight Line Distance to M A 56 | B 22 | C 30 | D 29 E 29 | F 30 | G 14 | H 10 I 8 | J 5 | K 30 | L 15 M 0.00	6
B.	6	1	Two players, MAX and MIN, are playing a game. The game tree is shown below. Upward-Pointing triangles denote decisions by MAX; downward-pointing triangles denote decisions by MIN. Numbers on the terminal nodes show the final score: MAX seeks to maximize the final score.  (a) Write the minimax value of each nonterminal node (each upward-pointing or downward-Pointing triangle) next to it. (b) Suppose that the minimax values of the nodes at each level are computed in order, from Left to right. Draw an X through any edge that would be pruned (eliminated from consideration) using alpha-beta pruning. (c) In this game, alpha-beta pruning did not change the minimax value of the start node. Is there any deterministic two-player game tree in which alpha-beta pruning changes the Minimax value of the start node? Why or why not?	1+1+2
Q. 4. A.	4	4	**Convert following facts into predicate logic.** ● **Jack owns a dog** ● **Every dog owner is an animal lover.** ● **No animal lover kills an animal.** ● **Either Jack or Curiosity killed the cat, who is named Tuna.** **Prove that " Did curiosity kill the cat" using resolution**	**6**
			OR	
	4	4	Give the proof for the following 1. Prove that "A valid sentence is true in all models (a tautology)" 2. Your knowledge base (KB) is this: B $B \Rightarrow C$ $B \wedge C \Rightarrow A$	6