

**PART II - Problem Solving**

10. (16 points) Figure(3) shows a directed graph with nodes, corresponding heuristic function  $h(n)$  values, edges and associated costs.

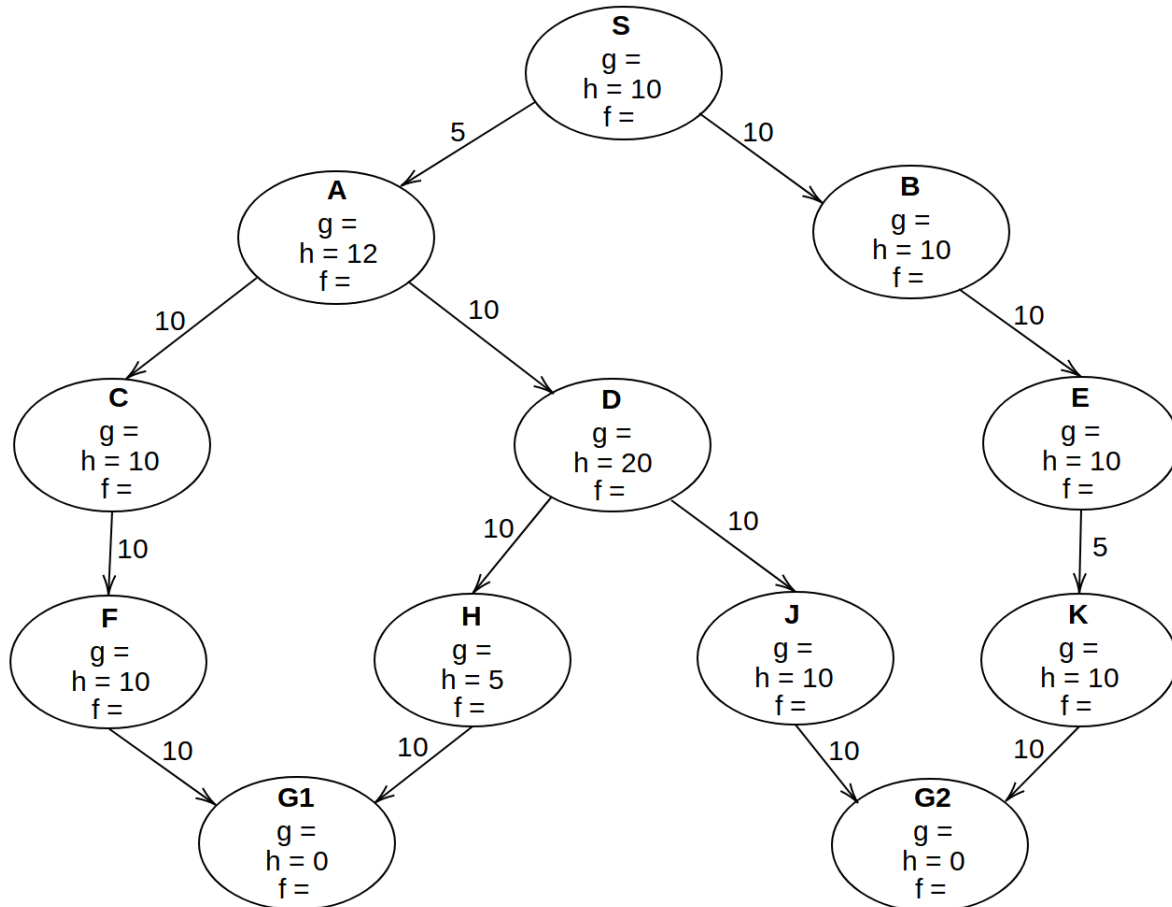


Figure 3: Directed Graph of A\* vs Greedy Question

- (a) What solution and goal would be returned if you run Greedy Best-First Search on this graph? What is the total cost of solution?
- (d) Write the condition (inequality) for consistency. Is heuristic  $h$  consistent? Hint: If you want to show it is consistent, you have to prove it for all nodes on the graph. If you want to state it is not, one counter-example is sufficient.