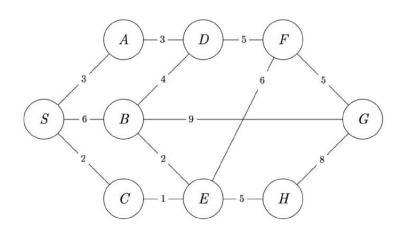
## CS 340 Artificial Intelligence Quiz # 2 (CLO 2) 19 March, 2025

Total Marks :10

Name:	No:
<u> </u>	110

Q. For the A\* algorithm, find the nodes expanded and the path from  $\bf S$  to  $\bf G$  (break ties alphabetically): Edges are bi-directional. To get credit, annotate the values of  $\bf f(n)$ ,  $\bf g(n)$  and  $\bf h(n)$  appropriately.



State	h(n)
S	12
Α	11
В	9
С	5
D	8
E	3
F	5
Н	6
G	0

(S, A), 3+11
(S, A), 6+8
(S, A, D), 6+8
(S, A, D, B), 10+9
(S, C, E, B, S), 11+12
(S, C, E, B, D), 9+8
(S, C, E, B, G), 14+0

Declare Success!!!

Node expanded: 7

Path returned: (S, C, E, B, G)