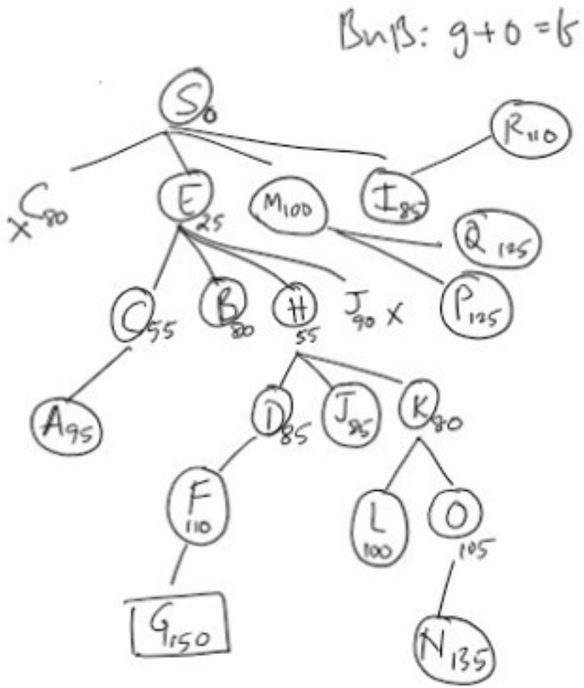
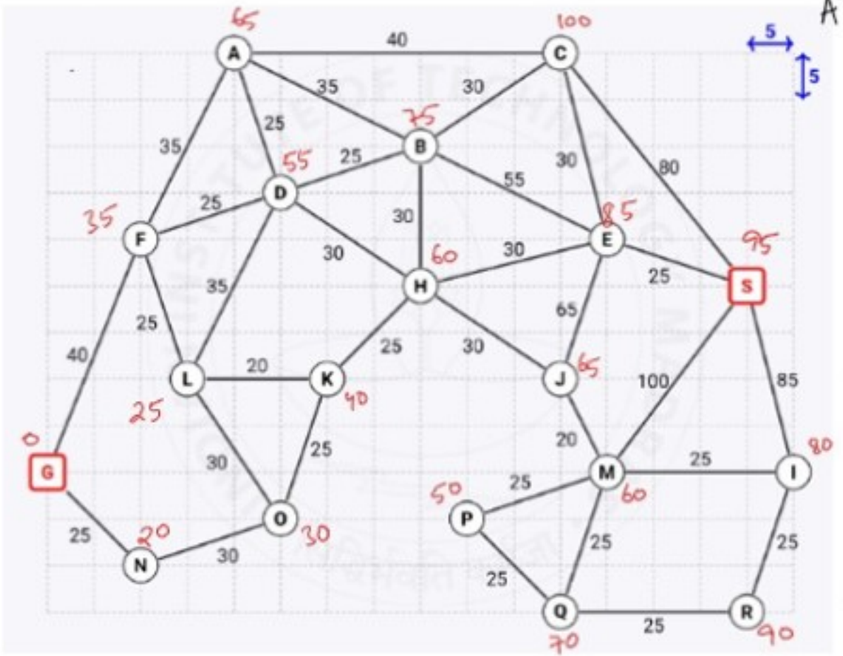
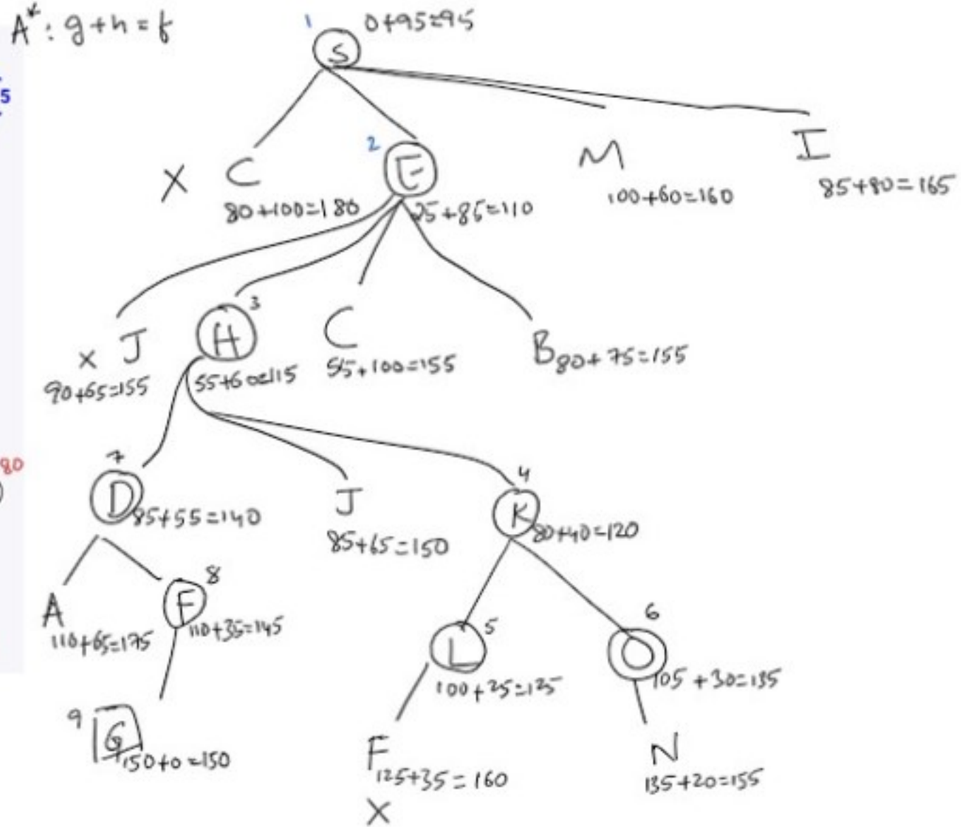


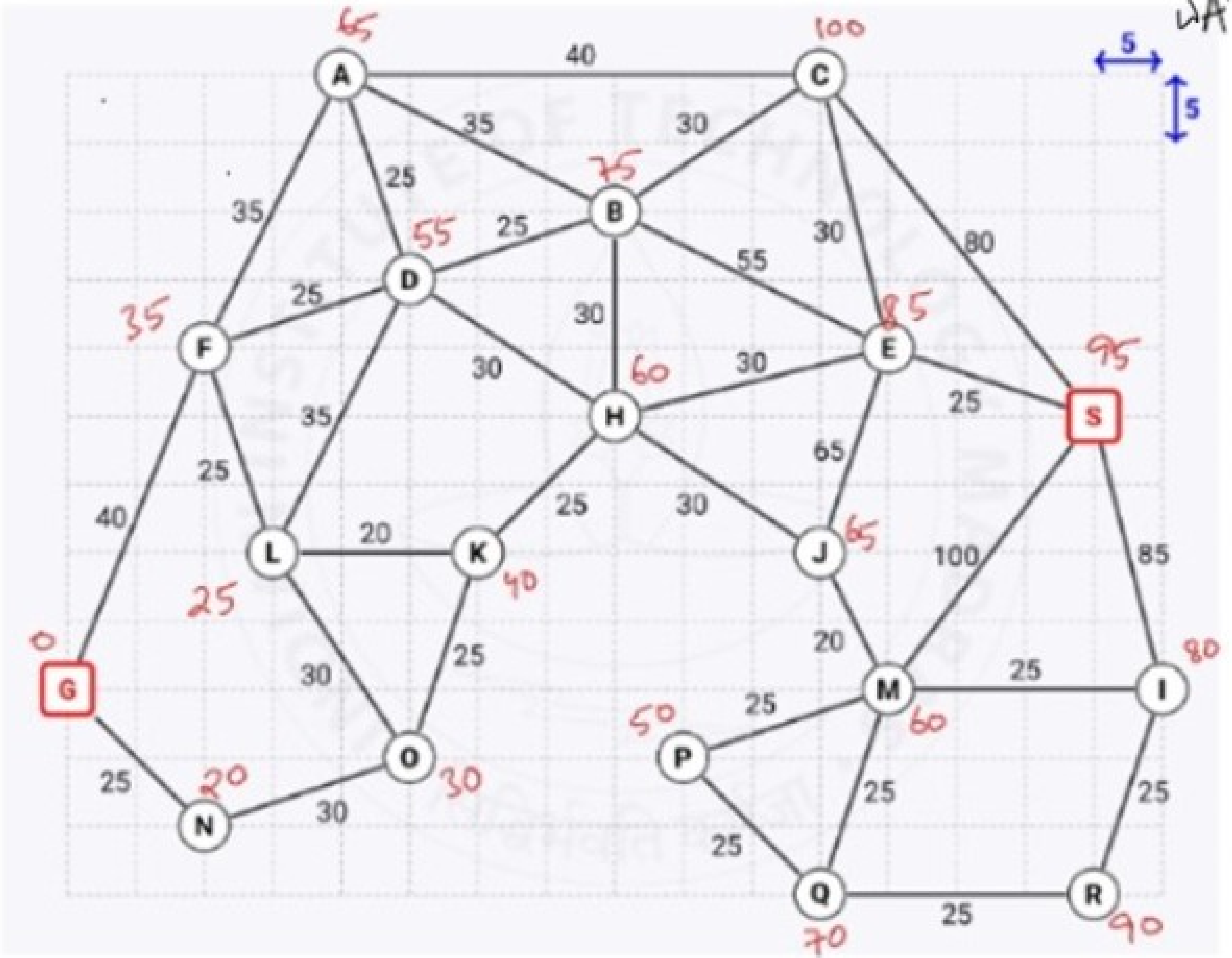




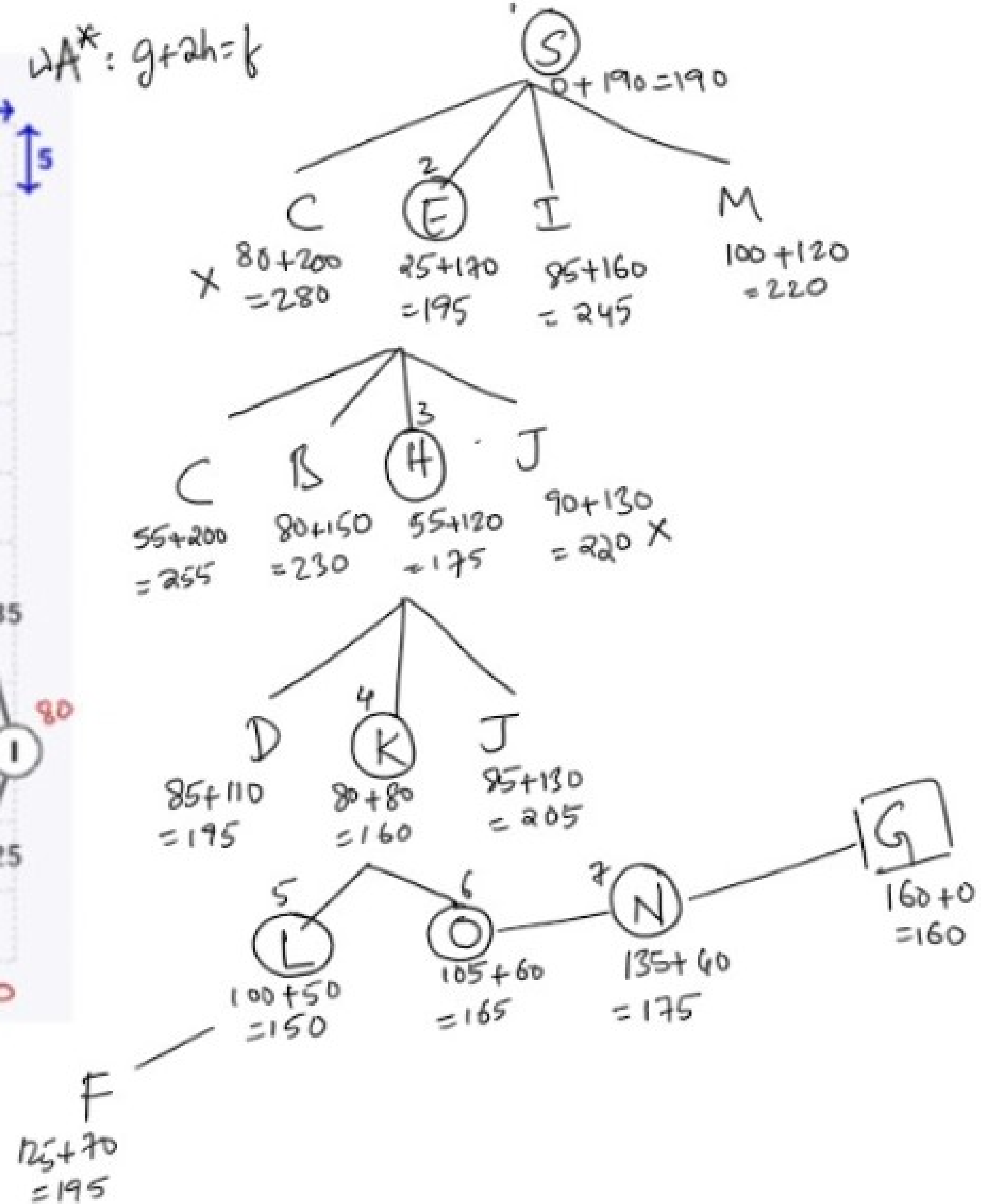
7) Did A* find an optimal path?

- a. Yes
- b. No
- c. Cannot be determined

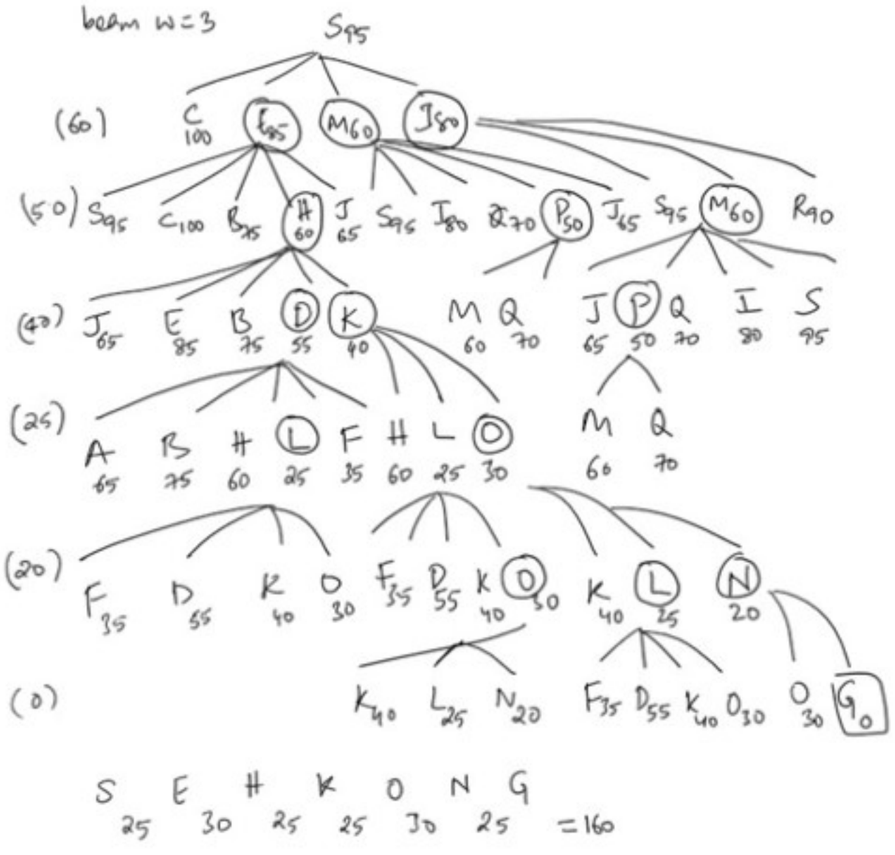
wA*: g+2h=f

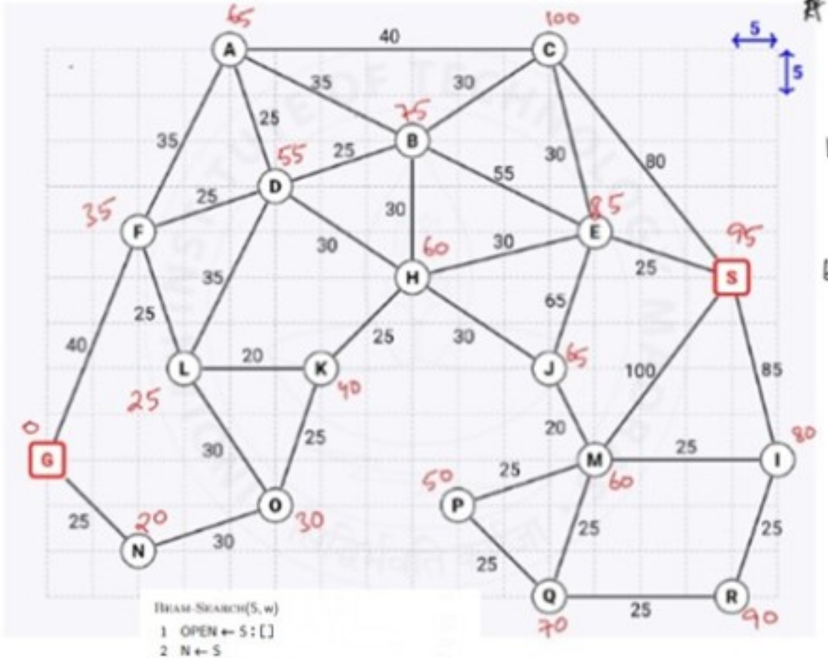


A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
40
35
30
25
55
80
65
20
100
85



S
0+190=190
C
80+200
=280
E
25+170
=195
I
85+160
=245
M
100+120
=220
C
55+200
=255
B
80+150
=230
H
55+120
=175
J
90+130
=220
D
85+110
=195
K
80+80
=160
J
85+130
=205
L
100+50
=150
O
105+60
=165
N
135+40
=175
G
160+0
=160
F
125+70
=195





BEAM-SEARCH(S, w)
1 OPEN ← S : []
2 N ← S
3 **do** bestEver ← N
4 **if** OPEN **contains goal node**
5 **return that goal node**
6 **else** neighbours ← MOVE-GEN(OPEN)
7 OPEN ← **take** w (**sort**$_h$ neighbours)
8 N ← **head** OPEN ▷ best in new layer
9 **while h**(N) **is better than h**(bestEver)
10 **return** bestEver

beam width = 2