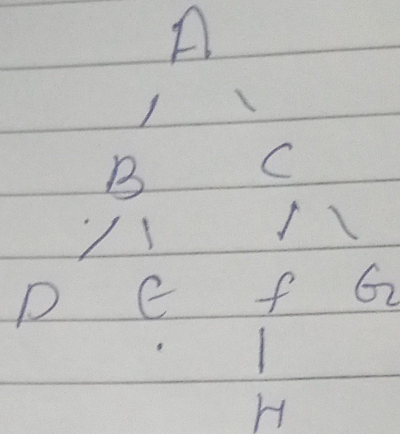


Q1.

Bfs



Step

node
expansion.

nodes

1	A	B, C
2	B	C, D, E
3	C	D, E, f, G
4	D	E, f, G
5	E	f, G
6	f	G, H
7	G	H
8	H	goal found.

path:

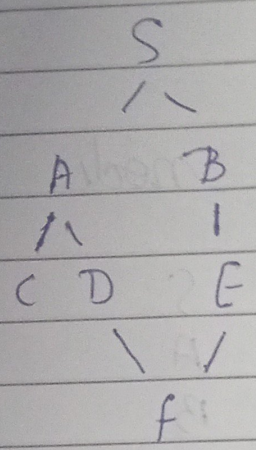
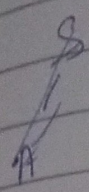
A → C → f → H

parent table:

H ← parent (f)
 f ← parent (C)
 C ← parent (A)
 A ← start

BFS :-

8.



find a path from Start (S) to Goal (G)

1st path :-

Step	node	Queue
1	S	A, B
2	A	B, C, D
3	B	C, D, E
4	C	D, E
5	D	E, f
6	E	f
7	f	Goal

parent table :-

node	parent
A	S
B	S
C	A
D	A
E	B
f	D

path :-

S → A → D → f

2nd path =

Step	node	Queue
1	S	A, B
2	A	B, C, D
3	B	C, D, E
4	C	D, E
5	D	C, f
6	E	f
7	f	goal ✓

path =

S → B → E → f

parent node	parent
S	-
B	S
E	B
f	E