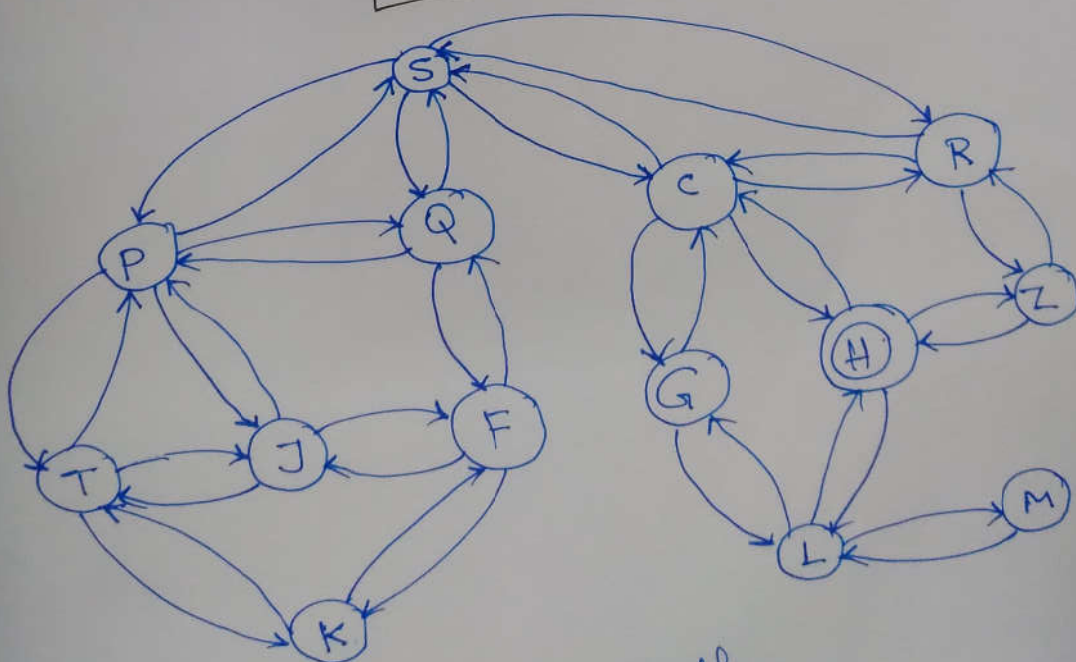


Solution of Quiz-1

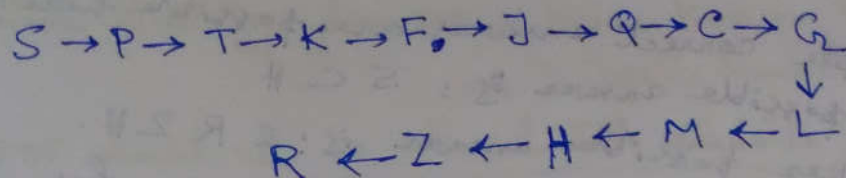
1. List the nodes visited by depth-first search, starting with the node S till it terminates.

Node N	MoveGen (N)
S	(P, Q, C, R)
P	(T, J, Q, S)
Q	(P, F, S)
C	(G, H, R, S)
R	(C, Z, S)
T	(K, J, P)
F	(J, K, Q)
G	(L, C)
H	(L, M, Z, C)
Z	(H, R)
J	(T, F, P)
K	(F, T)
L	(M, H, G)
M	(H, L)



State space graph

Ans. nodes visited

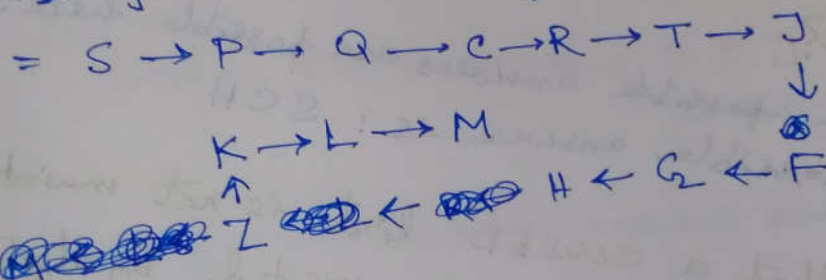


2. What is the path found, if any, by depth first search?

$S \rightarrow C \rightarrow H$

3. List the nodes visited by breadth first search starting with the node S till it terminates.

List of nodes visited by breadth first search



4. What is the path found, if any, by breadth first search?

Path = $S \rightarrow C \rightarrow H$.

5. Assuming that a CLOSED list is not maintained, list the order in which nodes visited by algorithm DFID. You may assume that a node already in OPEN is not added again to OPEN if generated again.

Depth	List of nodes visited
0	S
1	$S \rightarrow P \rightarrow Q \rightarrow C \rightarrow R$
2	$S \rightarrow P \rightarrow T \rightarrow J \rightarrow$ S $\rightarrow Q \rightarrow P \rightarrow F$ $S \leftarrow Z \leftarrow R \leftarrow S \leftarrow H \leftarrow G \leftarrow C \leftarrow S$



~~Ans: There are more than one list is there~~

~~One possible list = S P J R Q K T C G L M H Z R~~

~~another possible list = S P J F K T~~

6. What is the path found, if any, by DFID?

$S \rightarrow C \rightarrow H$

X

(S, P, Q, Y)	2
(2, P, C, T)	9
(2, P, J)	8
(2, R, H, Q)	5
(2, S, C)	9
(9, C, Y)	7
(P, R, C)	7
(C, J)	2
(C, S, M, J)	4
(R, H)	5
(9, R, T)	6
(T, J)	8
(C, H, M)	1
(J, H)	M