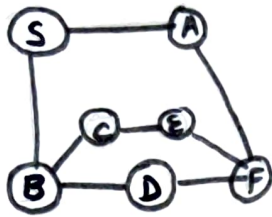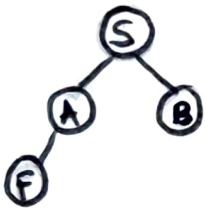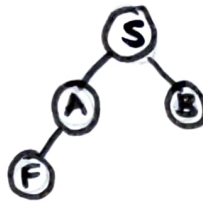Assignment –I
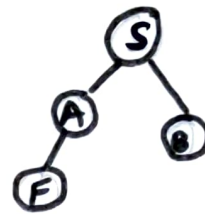
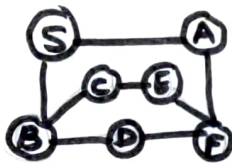1) Graph I: BMS, BFS, DFS (Source S, Goal F)

BMS :

BFS :
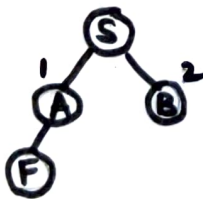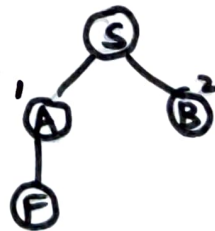

DFS:

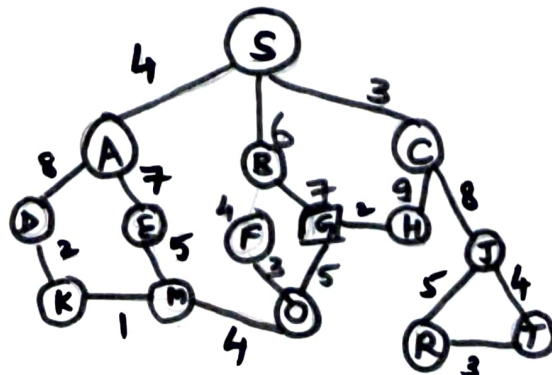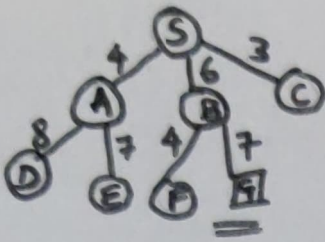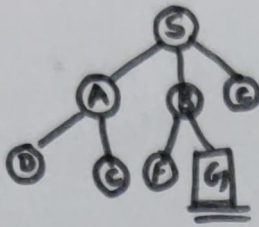2) Graph I : Hc, Beam Search (Source S, Goal F) Assume uniform cost/H.

Hc:

Beam Search:

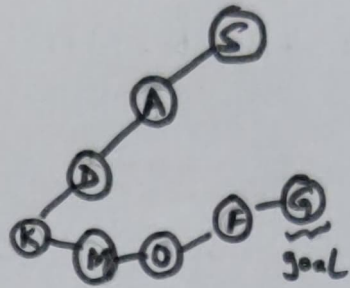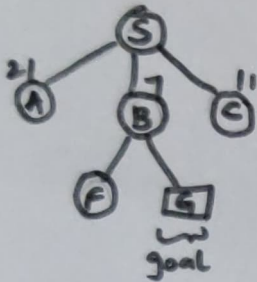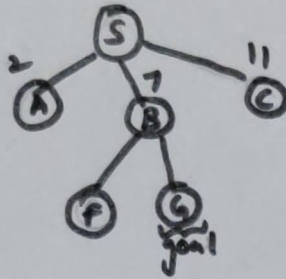3) Apply all algorithms to problem below (Source S, Goal G).

BMS:

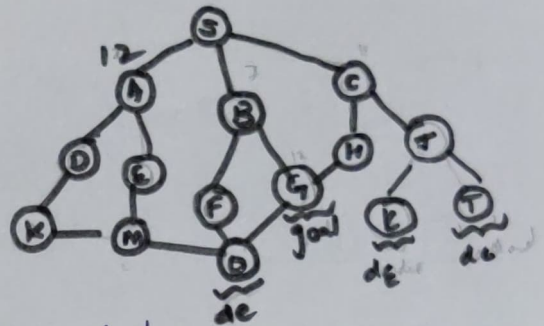S, A, B, C, D, E, F, I
4, 6, 3, 8, 7, 4, 7

BFS:

S, A, B, C, D, C, F, G

DFS:

S, A, D, K, M, O, F, G
goal

HC:

S, A, B, C, F, I
2, 7, 11
goal

Beam Search:

S, A, B, C, F, G
2, 7, 11
goal

Oracle:

S, A, B, C, D, E, F, H, T, K, M, Q, G, K, T
12, 7
goal   de   de
de

Branch & bound:

S, A, D, C, H, J, G
goal

Branch & bound with extended list:

S, A, B, C, D, E, H, T, F, G, N, T
BB
B1   B2
goal

Branch & bound with heuristics

S, A, B, C, F, G, D, G
goal
goal
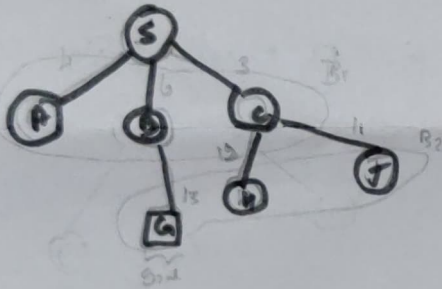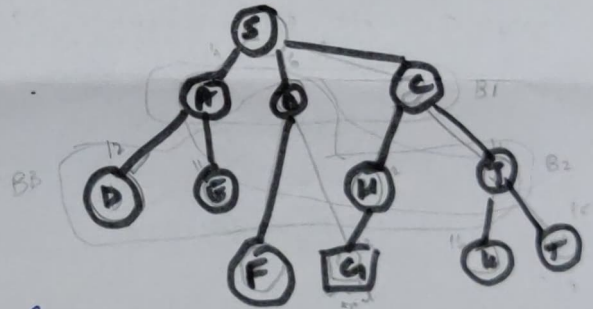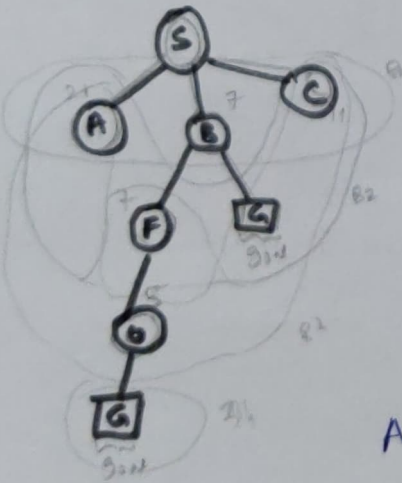
Extended list branch & bound with H.

S, A, B, C, P, I, O
B1
B2
B4

A⋆ −

S, A, B, C, G
goal
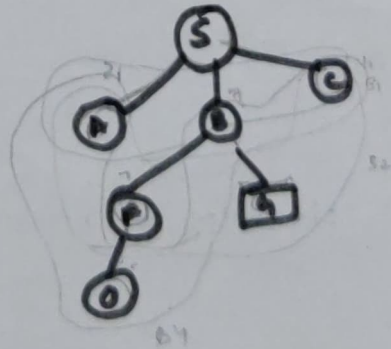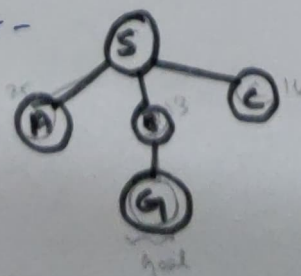
Best first search −

4) Apply all alg to problem below (Source S, Goal G)

BMS:

BFS:

DFS:

HC:

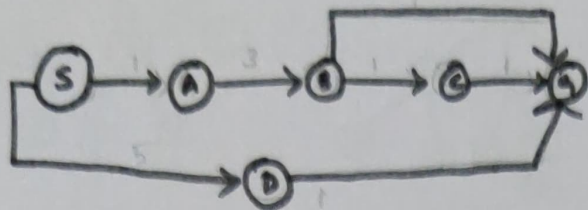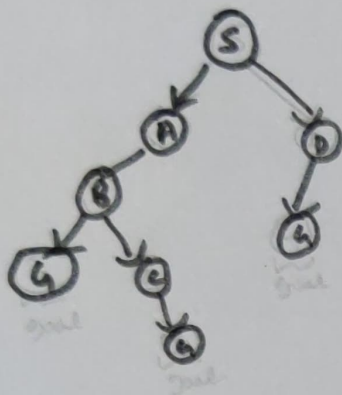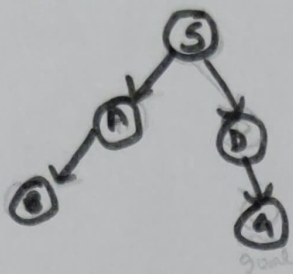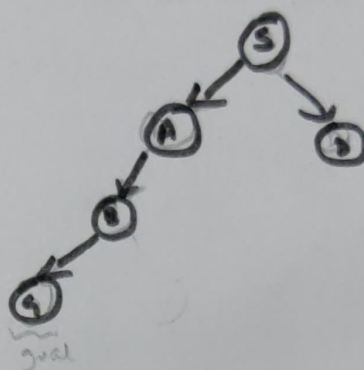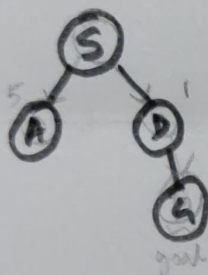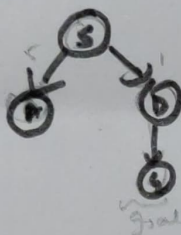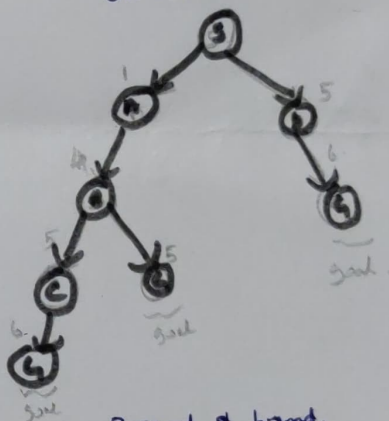**Beam search:**

Oracle-

Branch & bound, C:
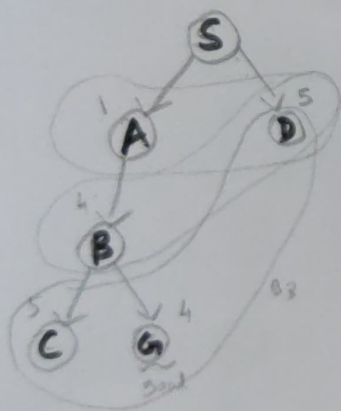
Branch & bound, EL:
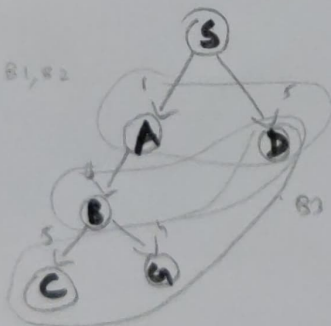
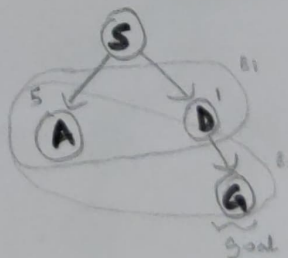**Branch & bound, H:**

Ext list, branch + bound, h:

A*:

Best first search =