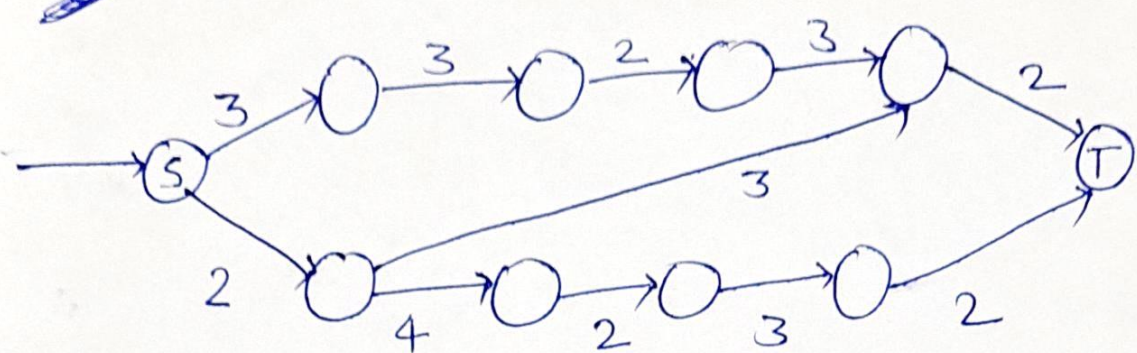
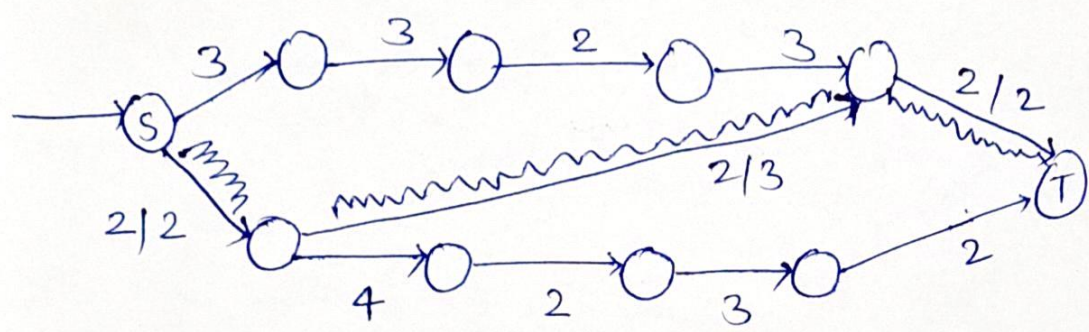


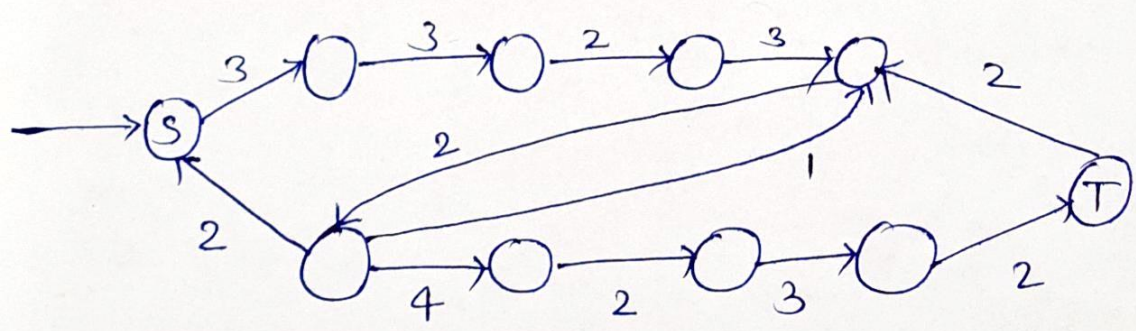
Q3



Iteration 1: Edmonds-Karp algo will choose path with 2 unit weight from S



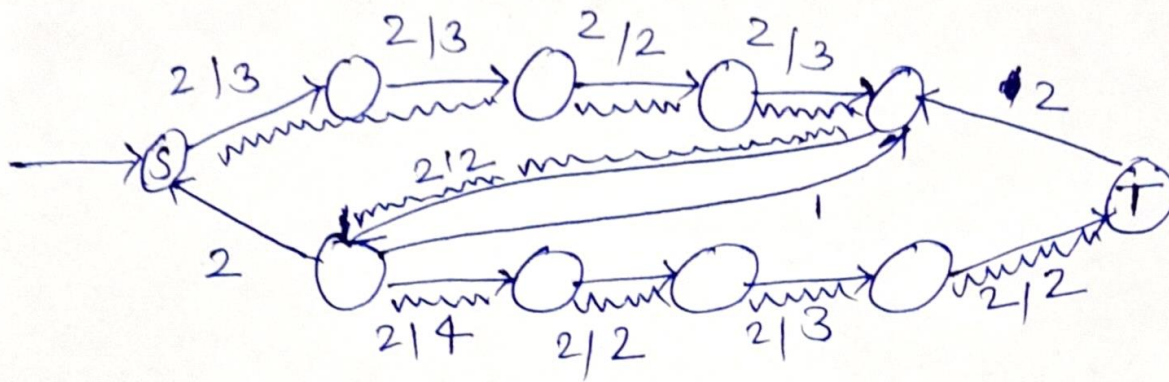
Residual graph after 1st iteration (graph with backward edges)



current
max flow = 2

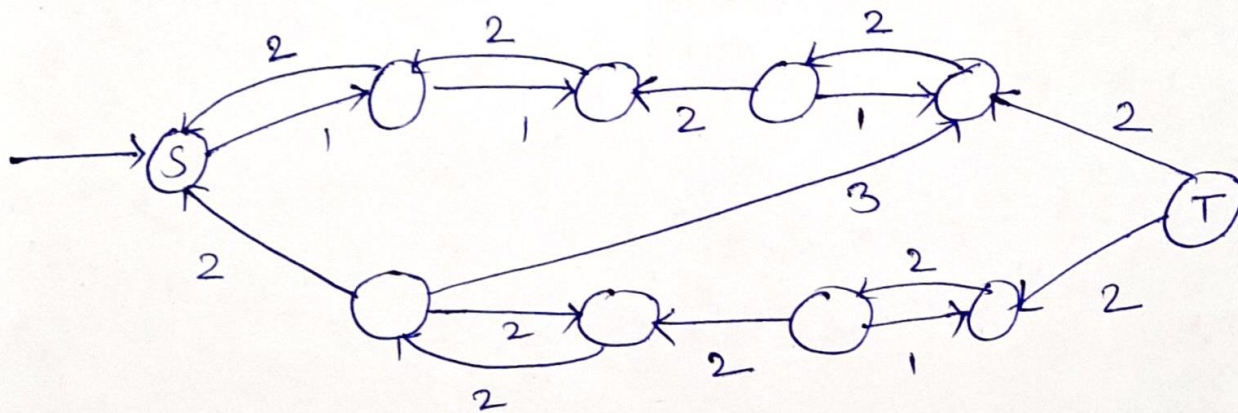
Now in 2nd iteration it will choose path starting from S with weight 3 units and will have to use backward edge 2 and continue with lower path to reach T

Iteration 2:



Here backward edge with weight 2 connecting upper path with lower path is used.

Residual graph after 2nd iteration



Current
max flow
= $2+2$
= $\boxed{4}$

After this there is no path possible from S to T