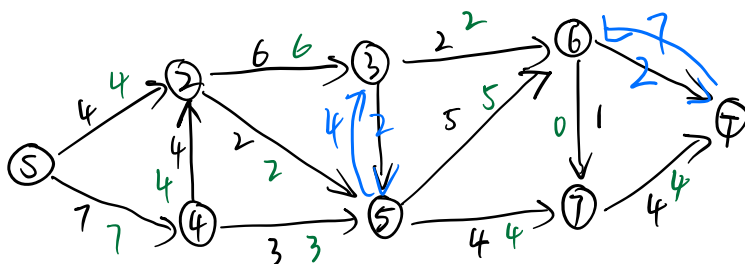


Q12.

Final residual graph:



So, we can use Ford Fulkerson algorithm, the max flow is:

augmented path	bottle neck
S-4-2-3-5-6-T	4
S-4-3-5-7-T	3
S-2-3-6-T	2
S-2-5-6-T	1
S-2-5-7-T	1

Then, we can get the max flow according the table is:-

$$\text{max flow} = 4 + 3 + 2 + 1 + 1 = 11$$