Q1

Wednesday, January 27, 2021   12:48 PM
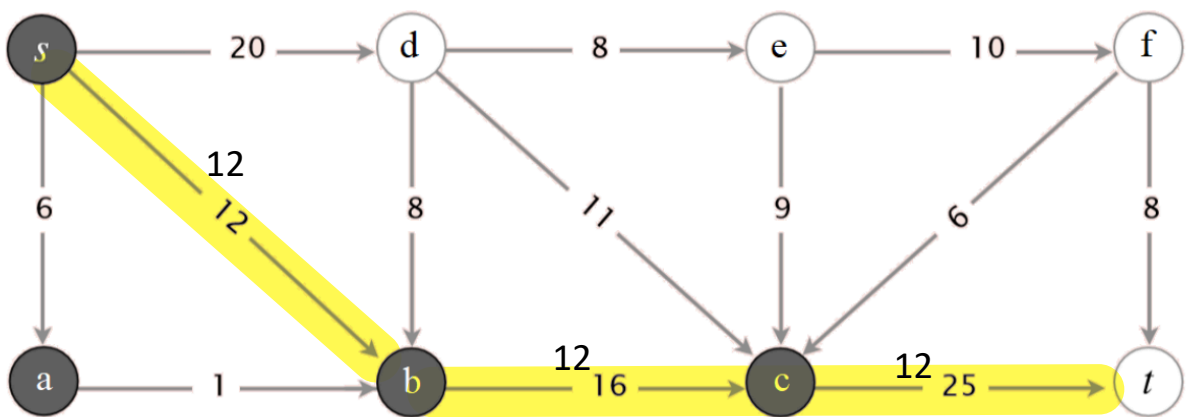
Q1.
Part 1:

Step 1:
Path: s-b-c-t
Bottle Neck: 12
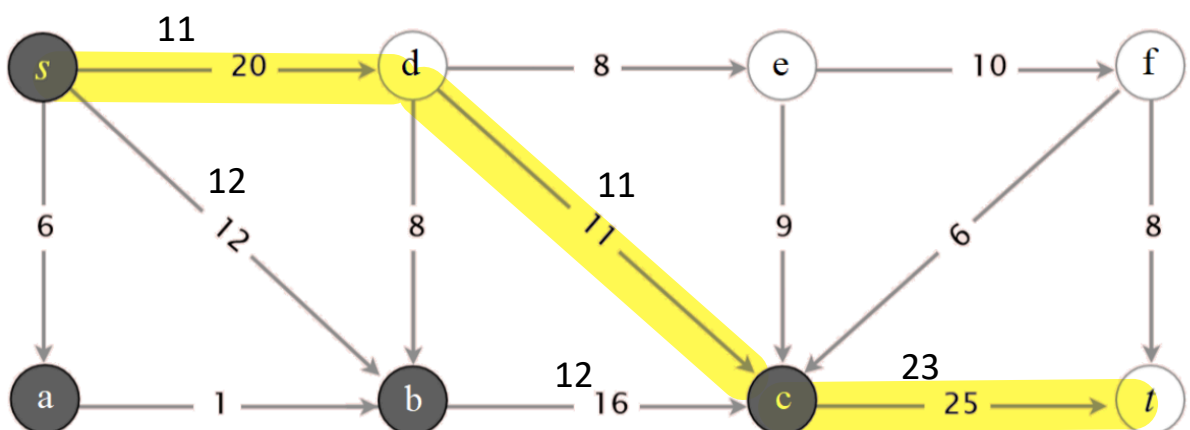Max Flow: 12

Step 2:
Path: s-d-c-t
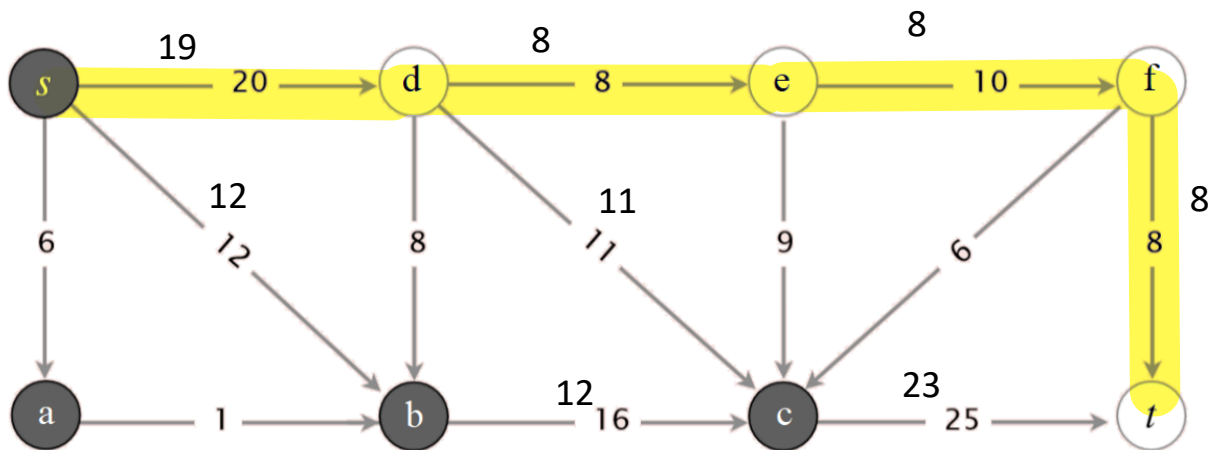Bottle Neck: 11
Max Flow: 23

Step 3:
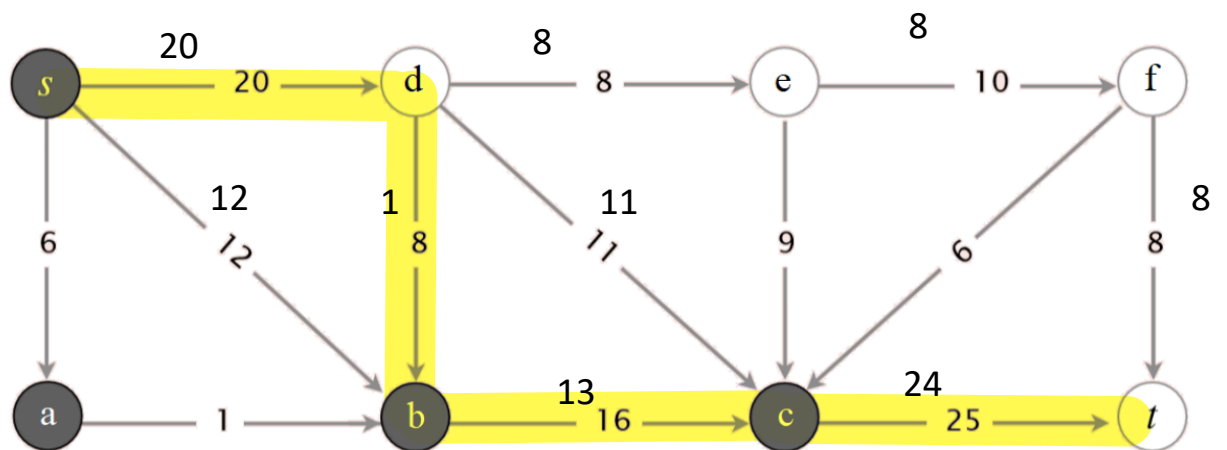Path: s-d-e-f-t
Bottle Neck: 8
Max Flow: 31

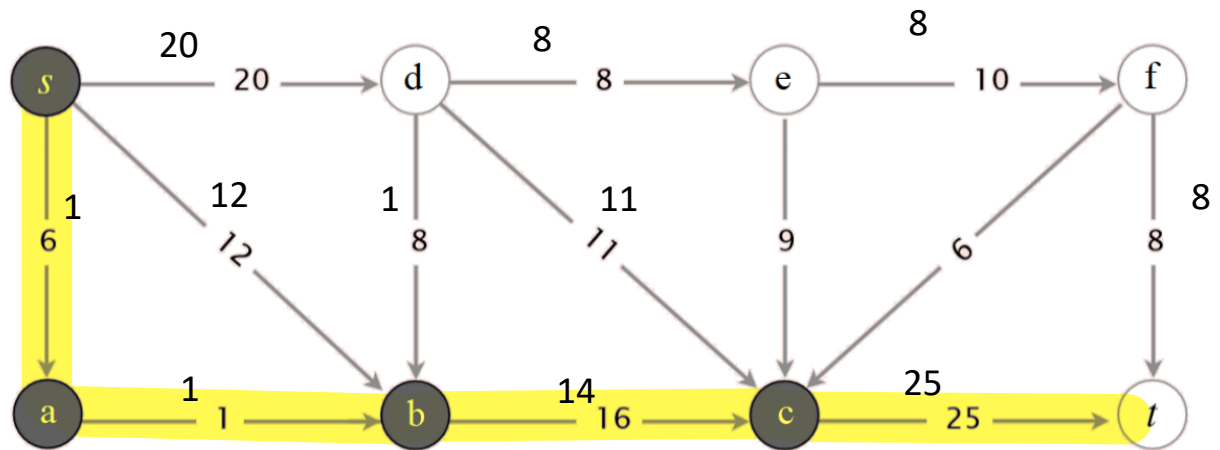**Step 4:**
Path: s-d-b-c-t
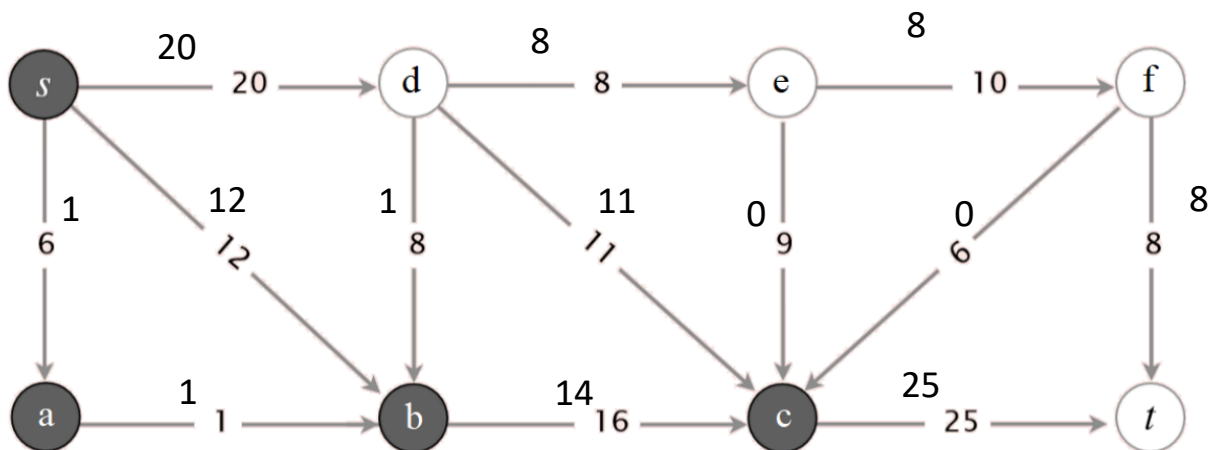Bottle Neck: 1
Max Flow: 32

Step 5:
Path: s-a-b-c-t
Bottle Neck: 1
Max Flow: 33

Now I known I'm done since all the edges that go to the sink are full and I can't find any path from S to T on my residual graph, so we have the max flow possible.

Part 2:
No, {s, a, b, c} isn't a min-cut since the capacity of the cut is 20+25 = 45
45 but the maxflow value is 33 and we know that min cut = max flow.