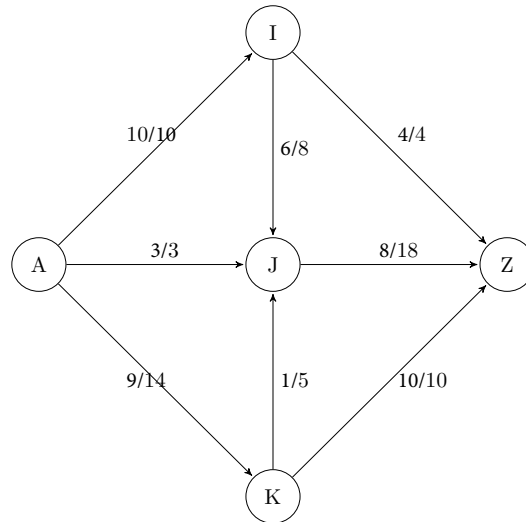


CS2223 D Term 2020 Quiz 23

(1 point) Question 1: “My brain is open...”

I pledge that I am taking this quiz on my own, with help from no one else and no notes:

(3 points) Question 2: What is the value of the maximum flow of the network below?



- a.) 20
- b.) 24
- c.) 25
- d.) 27
- e.) 32

(3 points) Question 3: How many edges are in the minimum cut of the flow network?

- a.) 2
- b.) 3
- c.) 4
- d.) 5
- e.) 6

(3 points) Question 4: Which of the following edges is part of the minimum cut of the flow network?

- a.) (A,K)
- b.) (I,J)
- c.) (I,Z)
- d.) (K,J)
- e.) All of these edges are part of the minimum cut of the flow network.

(1 point) Bonus Question: For networks represented by adjacency lists, the maximum number of augmenting paths needed by our algorithm never exceeds $|V||E|/2$, and the time required for the needed Breadth First Search for each augmenting path is $O(|V| + |E|) = O(|E|)$. Thus our overall time complexity is:

- a.) $O(|V|)$
- b.) $O(|E|)$
- c.) $O(|V||E|)$
- d.) $O(|E|^2)$
- e.) $O(|V||E|^2)$