Massachusetts Institute of Technology 18.453: Combinatorial Optimization Instructor: Cole Franks Notes: Michel Goemans and Zeb Brady April 8, 2021

Problem set 4

This problem set is due on **Monday**, **April 26**, **2021**. Instructions same as the first pset; some key points: collaboration is encouraged but you **must** write up your answers in your own words. You are required to list and identify clearly all sources and collaborators except instructors, TA or lecture notes. Solutions available for optional/extra credit problems upon request.

To submit your homework, upload it in PDF format using the Gradescope tool in Canvas before the deadline.

- 1. Exercise 4-1 of the notes on flows and cuts.
- 2. Exercise 4-2.
- 3. Exercise 4.3.
- 4. Extra credit/optional: Exercise 4.5 (1pt), Exercise 4.6 (1 pt), and reading about the non-terminating example on https://en.wikipedia.org/wiki/FordFulkerson_algorithm