## Homework 10 EE 313 Signals and Systems (Fall 2024) Tuesday, November 26, 2024

- 1) 7.2ace
- 2) 7.3beg (ztrans portion optional)
- 3) 7.4bf
- 4) 7.11e Using MATLAB, plot the partial fractions solution for  $0 \le n \le 10$  and on another stem plot show the answer found using long division (Hint: dimpulse.m function). Label stems. For each case, place the partial fractions solution plot on the top and the long division answer plot on the bottom of the same page. Attach m-files. Are the plots the same?
- 5) 7.24abe For e), plot the answers using MATLAB from parts a) & b) (i.e., partial fractions solutions) for  $0 \le n \le 5$  and on another stem plot show the answer found using long division (Hint: dimpulse.m function). Label stems. For each case, place the partial fractions solution plot on the top and the long division answer plot on the bottom of the same page. Attach m-files. Are the plots the same? Is the system stable or not? Why?
- 6) 7.25 For b), plot the answer from a) using MATLAB (i.e., partial fractions solution) for  $0 \le n \le 10$  and on another stem plot show the answer found using long division (Hint: dimpulse.m function). Label stems. Place the partial fractions solution plot on the top and the long division answer plot on the bottom of the same page. Attach m-file(s). Are the plots the same? Is the system stable or not? Why?
- For problems using MATLAB, include both m-file(s) (put your name in a comment line) as well as output figures (put your name in title) for each problem and/or problem section.

## Due Wednesday, December 4, 2024