In the name of GOD

signals and systems homework 2

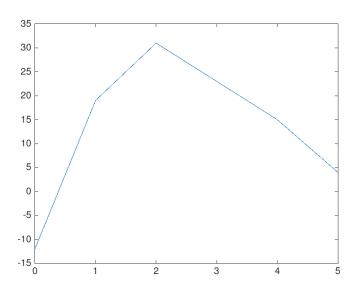
report

Amir H Pirhosseinloo

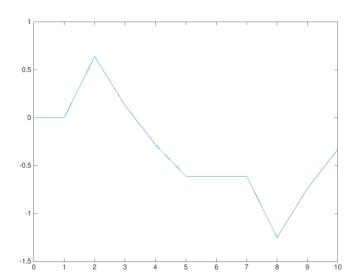
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1. Question 1

a. part a

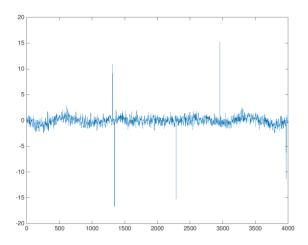


b. part b

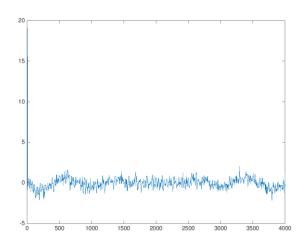


2. Question 2

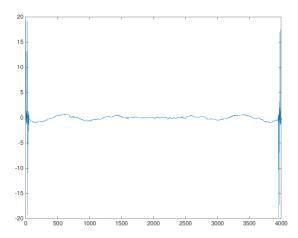
- a. part a
 - i. median blur w = 5



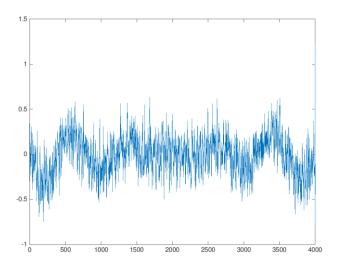
ii. median blur w = 10



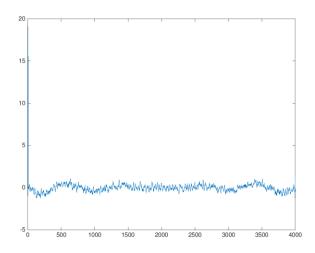
iii. median blur w = 100



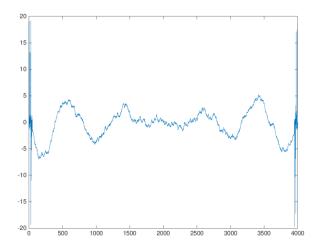
iv. Gaussian blur w = 5



v. Gaussian blur w = 10



vi. Gaussian blur w = 100



b. part b: Yes

$$h(t) = \frac{1}{std * sqrt(2 * pi)} * e^{((x(t) - u)^2)/(2 * std^2)))$$

$$y(m) = \sum_{k=m-2}^{m+2} \frac{h(k)}{5}$$

c. part c: No

- 3. Question 3
 - a. box blur w = 3



b. box blur w = 5



c. Gaussian blur w = 3



d. Gaussian blur w = 5

