Weekly Exercise 1: Submission Deadline: 18-10-2021

1) Using necessary python packages implement the linear convolution for following problems and take the screenshot of the resulting output and write necessary observation with input, impulse and output values.

(Marks distribution : 2 marks for each problem, → 1 mark for observation writing and 1 mark for correct screenshot)

1. x(n) = [2,1,3,2,1] , h(n) = [4,3,2,1]
2. x(n) = [1,1,1] , h(n) = [1,0.5,0.25]
3. x(n) = [1,0,1,0,1,1,1,1] , h(n) = [1,1,1]
4. x(n)=[1,3,2,1,2,2,1,1,3,2], h(n)=[1,0,8,0,4,0,0,1]
5. x(n) = [3,2,1,0,0,0] , h(n) = [1,1,1]

Note:

1. All exercises must be implemented using Jupyter Notebook.(Language:python)
2. Please do all sub questions in a single Jupyter notebook only.
3. Install and import all necessary packages based on the task given.
4. Indicate all steps clearly with explanation.
5. After execution download .pdf and .ipynb file which includes code, explanation as well as output.

Do's:

- Please use Jupyter notebook to complete your lab exercises and submit before deadline.
- In Jupyter notebook please add the complete explanation for the topic and modules/libraries you used to complete the lab exercise.
- Once you complete the lab exercise please record the working demo screenshot of theexercise and upload.
- Save your notebook filename and video as your_roll_no.ipynb. (eg. 217IT49_yourname.ipynb).

Dont's:

1. Do not to share the solution of the lab exercise with the other groups.