

**Lab – 3**

Subject: **Image and Video Processing**

Time: 1.5 hrs

***Note: Usage of built-in functions is not allowed only if specified. Internet will be turned-off at 4:30pm.***

1. C:\Users\IIITA\Downloads\DIP3E_CH03_Original_Images\DIP3E_Original_Images_CH03\embedded_square_noisy.tifGiven an image *“embedded\_square\_noisy.tif”* perform local histogram equalization. Also perform global histogram equalization and show the differences visually.  
   *Note: You can use built-in functions only for this question.*
2. C:\Users\IIITA\Downloads\DIP3E_CH03_Original_Images\DIP3E_Original_Images_CH03\Fig0333(a)(test_pattern_blurring_orig).tifGenerate a Gaussian filter mask of sizes and varying. Perform smoothening on the given image. Show the images visually using subplot with titles.
3. C:\Users\IIITA\Downloads\DIP3E_CH03_Original_Images\DIP3E_Original_Images_CH03\Fig0335(a)(ckt_board_saltpep_prob_pt05).tifYou are given a noisy image and you only know two filtering techniques average filtering and median filtering. Apply those operations on the noisy image and show the differences.
4. C:\Users\IIITA\Downloads\DIP3E_CH03_Original_Images\DIP3E_Original_Images_CH03\Fig0338(a)(blurry_moon).tifYou are asked to sharpen given blurry image using four different Laplacian masks.
5. C:\Users\IIITA\Downloads\DIP3E_CH03_Original_Images\DIP3E_Original_Images_CH03\Fig0340(a)(dipxe_text).tifGiven the image perform unsharp masking and high boost filtering. Show each steps visually.