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Test-2 Examination-April 2017
B.Tech- 8th Sem/M.Tech./DD (ECE)

Course Code: 16M1WEC231
Course Name: Advanced Digital Image Processing

Max. Marks: 25
Max. Time: 1.5 HR.

Note: All questions are compulsory. Carrying of mobile phone during examination will be treated as case of unfair means. Marks are indicated below each question

Q1. Write down the advantages and disadvantages of median filter. [3]

Q2. What is Laplacian operator? Determine the filtering mask for this. [3]

Q3. Perform histogram equalization on the following image which has 8 discrete levels. Find out the histogram equalized image which also has 8 discrete levels. [5]

4	4	4	4	4
3	4	5	4	3
3	5	5	5	3
3	4	5	4	3
4	4	4	4	4

Q4. With an example show that Sobel operator is used to enhance the edges in the digital image. [5]

Q5. What is the result of applying the Box filter on the following 8-bit gray scale image?

200	200	200	200	200
250	10	12	10	250
250	10	12	10	250
250	10	12	10	250
200	200	200	200	200

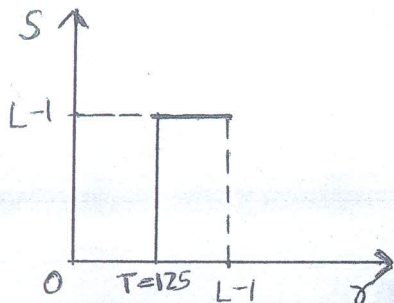
To avoid the problems at the edges of the image you only need to calculate the filtered values for the central 3x3 region. [5]

Q6. Consider the following 5x5, 8-bit image.

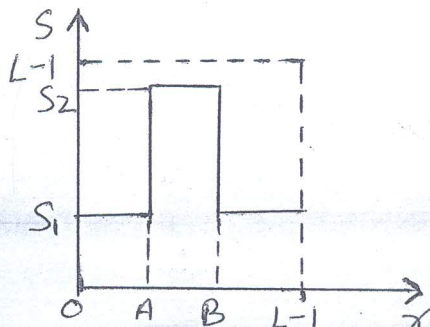
200	245	56	215	110
198	210	47	255	255
139	100	10	149	90
127	137	124	200	175
180	170	129	150	199

What is the output image if we apply following two point processing operations on the above image? [2+2]

(a)



(b)



A = 140
B = 200
S1 = 25
S2 = 240