(40 minutes)

ComputerVision Midterm Sınavı Date: 19.11.2014 Dr. Ediz ŞAYKOL

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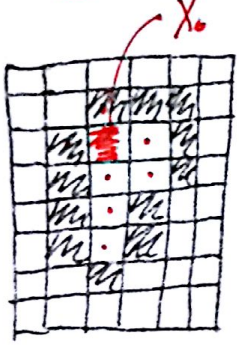
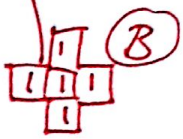
Q1) [20p] We apply image filtering to ..... remove noise (blur) ..... and ..... extract information (edge) ..... (2 reasons of usingimagefiltering)

Q2) [40p] Show the steps of Region Filling with 4-connected 3x3 structuring element for the below figure.



pick X_0, a single pixel inside.

$$X_k = (X_{k-1} \oplus B) \cap A^c$$



X_1

X_2

X_3

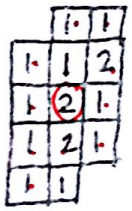
$X_4 = X_3$ stop at k=3

Filled region

$X_3 \cup A$

Q3) [40p] For the following image below, show the steps of Clipped-Mean Median Filtering steps.

40	60	50	60
70	40	50	40
30	20	40	45
50	40	60	80
90	40	50	70
30	40	20	40



S

13 elements

1)

	60	50
70	40	10
30	40	40
50	80	60
90	40	

clip. (28,8 , 86.5)

11 elements.

$\left\lceil \frac{11}{2} \right\rceil$ = 6. element

mean = 57.7

median = 50

2) .....

3)

4) kere yapılacak.

Scanned by CamScanner