

## ECE 5470 Digital Image Processing

### Homework # 11

*Due Date: April 27, 2020 4:00 pm*

#### 1. Erosion and Dilation

Download the images Fig7-1.tif. Refer to the image and the disk structuring element shown in the lower right of the image. Sketch what the set C,D,E and F would look like for the following sequence of operations.

- a.  $C = A \ominus B$
- b.  $D = C \oplus B$
- c.  $E = D \oplus B$
- d.  $F = E \ominus B$

#### 2. Hole Filling

Download the images Fig7-2.tif. The image has white circles with black holes. The objective is to eliminate the black holes. Write MATLAB code to eliminate the black holes using the fill all the holes procedure

#### 3.

Download the images Fig7-3.tif. Text on the image has noise. Write MATLAB code to eliminate the noise as much as you can using any algorithm