

## IIVP Lab Questions

**Do not use inbuilt function**

**Time: 1:30 Hr.**

- Q1. DIP Image has been corrupted by Gaussian noise with some high standard deviation. You are required to find that parameter. After finding that parameter apply inverse and Weiner filtering. Compare both the results.

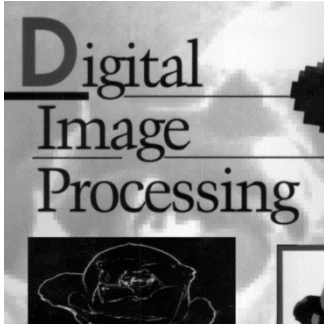


Figure 1 DIP Original



Figure 2 DIP affected by motion and Gaussian noise

- Q2. Perform the following on the image and plot using subplots.

- i) Erosion
- ii) Dilation
- iii) Opening
- iv) Closing

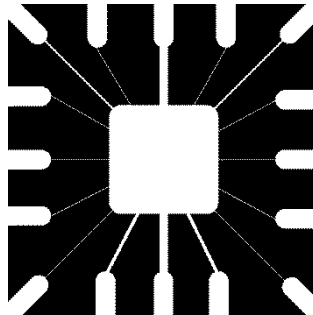


Figure 3 Image for Morphology

- Q3. Prove duality of Erosion and Dilation operation programmatically. Take image used in question number 2 for your experiment.

**Hint:  $\{A \ominus B = A^c \oplus B^c\}$**