**PART A**

1. Draw the image degradation model.
2. What is inverse filtering?
3. Give the PDF of uniform noise and sketch it.
4. Give the transfer function of mean and geometric mean filter.
5. Mention four applications of image segmentation techniques.
6. How an image is segmented using thresholding?
7. Define region splitting and merging.
8. Define a region growing?
9. Write the importance of edge detection.

**PART B**

1. Write notes on minimum mean square error filtering & inverse filtering.
2. Explain adaptive filters. What are the two levels of adaptive median filtering algorithms?
3. (i) Explain in detail about various mean filters.

(ii) Explain in detail about Order Statistics filters.

1. Explain region-based segmentation techniques.
2. Explain about the process of edge linking and boundary detection in detail.
3. Explain the segmentation process using morphological watersheds.