Assignment 1

Module 1

1. Explain the components of a general purpose image Processing system with a neat block diagram.
2. Define i) m - adjacency and ii) D8 Distance.
3. Explain the Processing of image acquisition using Circular sensor strip.
4. Explain the Process of image Sampling and quantization.
5. Mention the application of image Processing.
6. Briefly explain the following terms:
   i) Neighbours
   ii) Paths
   iii) connectivity of Pixels.
7. with the help of a block diagram, explain the fundamental steps in digital image Processing.
8. How is image acquired using a single sensor? Discuss.

Module 2

1. Compare histogram equalisation, histogram specification & contrast stretching with example.
2. Elaborate Hit or Miss transform with example. Differentiate between image enhancement and restoration.
3. Write short note on Image noise models.
4. Justify the following statement Histogram is a unique representation of an image.
5. Explain the following terms:
   i) Log transformation
   ii) Gray-level slicing
   iii) Bit-Plane slicing
   iv) Masking with OR operation
   v) Image Averaging
6. With necessary graphs, explain the following spatial image enhancement operations.
   i) Image negative
   ii) Log transformation.
   iii) Power law transformation
   iv) Contrast stretching.
7. What is histogram matching? Explain the development and implementation of the method.
8. Explain some of the widely used gray-level transformations.