GROUP – A

1. **ANSWER ANY FOUR .**   1.5 X 4 = 6

    a. Define image.

    b. What are the steps involved in DIP?

    c. What is image reconstructing? Where is it used?

    d. Give the formula for calculating D4 and D8 distance.

    e. What is Image Transformation?

    f. Name the categories of Image Enhancement and explain?

    g. Explain Mask or Kernels?

    h. Name the different types of derivative filters?

GROUP – B

ANSWER ANY 4 EACH CARRYING 6 MARKS

2. What is edge? Define Gradient Operator. What is meant by object point and background point?

                                                                             2+2+2

3. What is thresholding? What is global, local and dynamic thresholding?   3+3

4. Explain the major steps to detect an edge? Write a short note on neighbours of a pixel.   3+3

5. Describe Sobel edge detection algorithm.   6

6. a. What is meant by bit plane slicing?

   b. What are the three types of discontinuity in digital image? Explain each.   2+4

7. a. What is the advantage of using Sobel operator?

   b. Explain Gray level transformation in an image.   3+3

8. a. What do you mean by Histogram Matching and Equalization?

   b. Explain different types of smoothing and sharpening filters.   2+4

9. Perform Histogram specification. Draw original image histogram and Specified histogram.   6

ORIGINAL IMAGE

Gray Level	0	1	2	3	4	5	6	7
No. of pixels	6	4	5	7	8	10	12	12

SPECIFIED IMAGE

Gray Level	0	1	2	3	4	5	6	7
No. of pixels	0	0	0	0	10	20	40	30