Q. The greyscale clipping function in Fig. a) is applied on an image having the histogram in Fig. b). How will the histogram of the processed image look? Support your answer with an explanation.

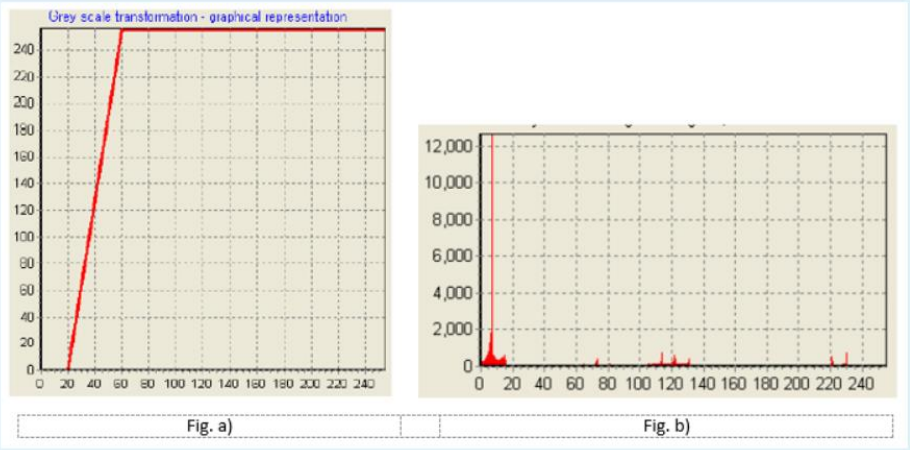


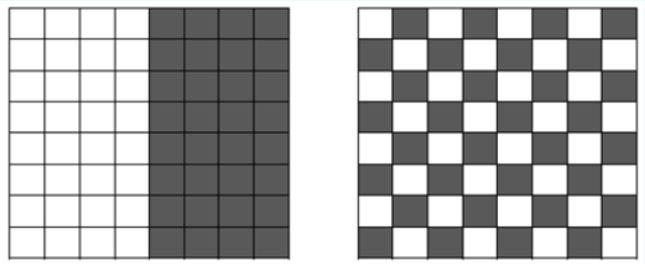
Fig. a) Fig. b)

a) Process that increases the dynamic range of Gray levels in an image is called _____.

b) Large value of gamma will produce _____ image. (darker/brighter)

Q. If you want to sharpen an image in frequency domain, what type of filters do you use? Explain an example of such a filter.

Q. The image shown in figure below are quite different, but their histogram are the same. Suppose that each image is blurred with a 3 X 3 averaging mask. Will the histogram be same? Explain. If no, sketch the new histogram after blurring effect.



Q. Explain how compression can be achieved using DCT Transform (only steps).

Q. Which derivative is more widely used in edge detection? What secondary information does the 2nd derivative gives during the edge detection.

Pair the following frequency domain images (Fig. 1) with their corresponding temporal domain images (Fig. 2).

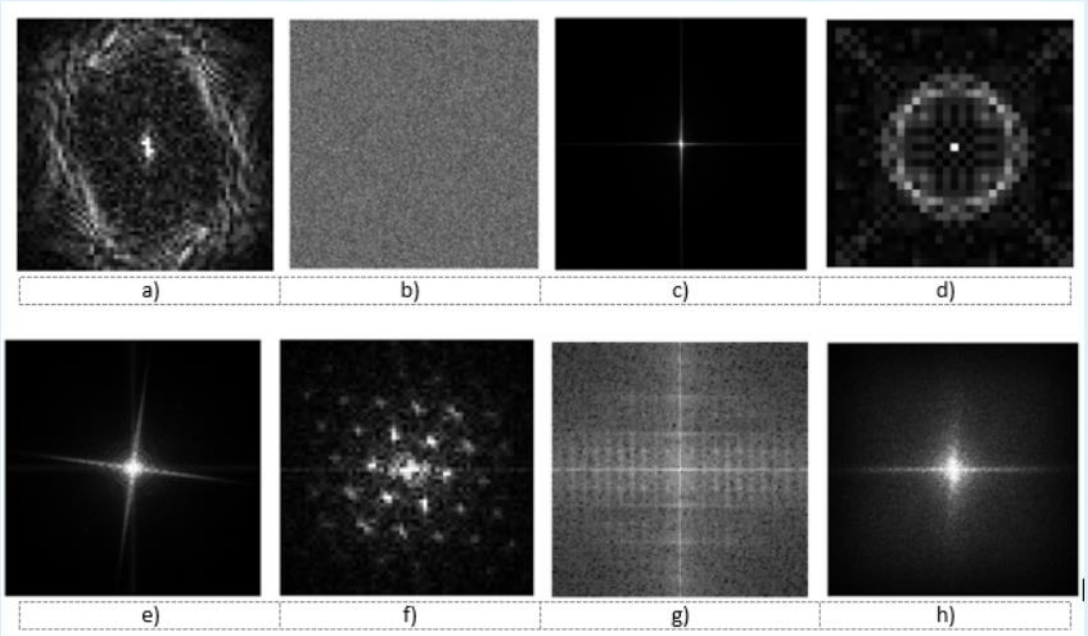


Fig. 1

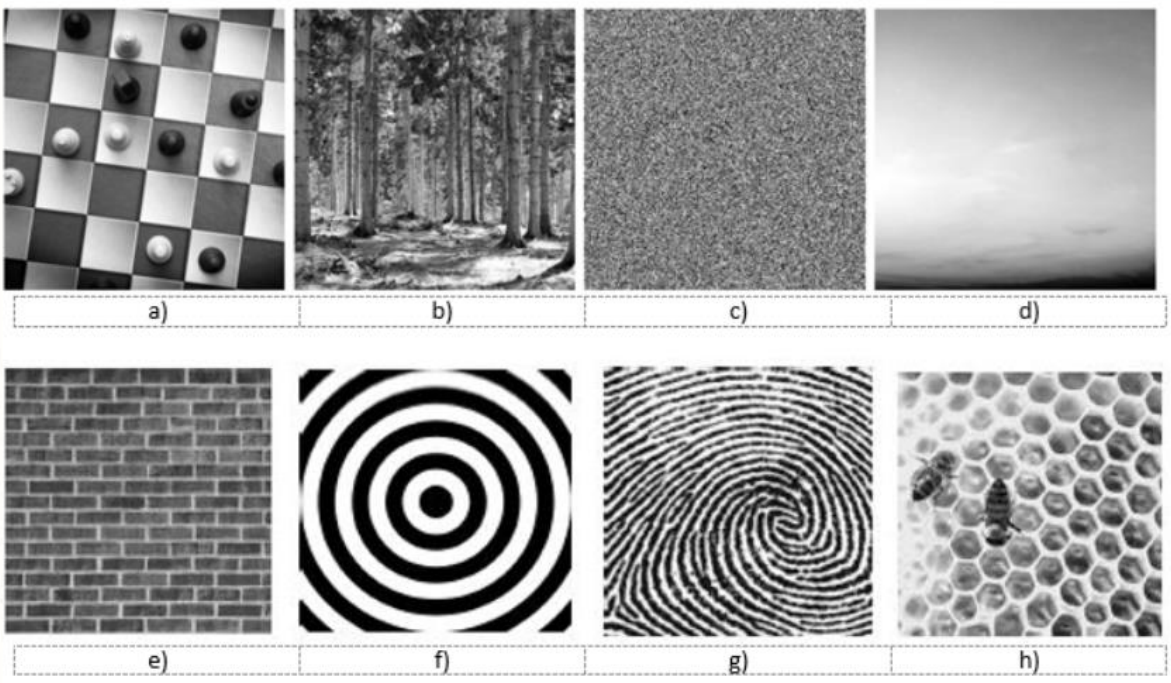


Fig. 2

Q. Draw the transformation curve for the conversion of grayscale image to the binary.

Q. Compute the Euclidean Distance (D_1), City-block Distance (D_2) and Chessboard distance (D_3) for points p and q, where p and q be (3, 0) and (2, 3) respectively. Give answer in the form (D_1, D_2, D_3).

Q. Can two different image have same histogram? Justify with an example.

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