1. Explain in detail the process of image digitization.
2. Propose a set of gray-level-slicing transformations capable of producing all the individual bit planes of an 8-bit monochrome image.
3. Propose a set of gray-level-slicing transformations capable of producing all the individual bit planes of an 8-bit monochrome image. What would be the effect on the histogram if we set to zero the higher-order bit planes instead?
4. Suppose that a digital image is subjected to histogram equalization . Show that a second pass of histogram equalization will produce exactly the same result as the first pass?
5. How m-adjacency of pixels is different from 8-adjacency? Explain with an example.
6. Explain the histogram equalization technique for contrast enhancement?
7. How do you correct gamma value in monitor using power-law transformation?
8. Explain the following two noise removal techniques:
   a) Neighbourhood averaging b) Median filtering
      Assume an image segment and calculate the value of the centre pixel when the above two techniques are applied with 3*3 neighbourhood.
9. Explain spatial domain processing with filters based on first order and second order derivatives.