1. A. Explain the steps involved in digital image processing.

B. Explain various functional block of digital image processing

2. Describe the elements of visual perception.

3. Describe image formation in the eye with brightness adaptation and Discrimination

4. Write short notes on sampling and quantization.

5. Describe the functions of elements of digital image processing system with a diagram.

6. Explain the basic relationships between pixels?

7. Explain the properties of 2D Fourier Transform.

8. (i)Explain convolution property in 2D fourier transform. (ii) Find F (u) and |F (u)|

9. Explain Fast Fourier Transform (FFT) in detail.

10. Explain in detail the different separable transforms

1. Explain the types of gray level transformation used for image enhancement.

2. What is histogram? Explain histogram equalization.

3. Discuss the image smoothing filter with its model in the spatial domain.

4. What are image sharpening filters? Explain the various types of it.

5. Explain spatial filtering in image enhancement.

6. Explain image enhancement in the frequency domain.

7. Explain Homomorphic filtering in detail.

1. Explain the algebra approach in image restoration.

2. What is the use of wiener filter in image restoration? Explain.

3. What is meant by Inverse filtering? Explain.

4. Explain singular value decomposition and specify its properties.

5. Explain image degradation model /restoration process in detail.

6. What are the two approaches for blind image restoration? Explain in detail.

1. What is data redundancy? Explain three basic data redundancy?

2. What is image compression? Explain any four variable length coding compression schemes.

3. Explain about Image compression model?

4. Explain about Error free Compression?

5. Explain about Lossy compression?

6. Explain the schematics of image compression standard JPEG.

7. Explain how compression is achieved in transform coding and explain about DCT

8. Explain arithmetic coding

9. Explain about Image compression standards?   
10. Discuss about MPEG standard and compare with JPEG

1. What is image segmentation. Explain in detail

. (OR)

2. Explain Edge Detection in details?

3. Define Thresholding and explain the various methods of thresholding in detail?

(OR)

4. Discuss about region based image segmentation techniques. Compare threshold region based techniques.

5. Define and explain the various representation approaches?

6. Explain Boundary descriptors.

7. Explain regional descriptors

8. Explain the two techniques of region representation

9. Explain the segmentation techniques that are based on finding the regions directly

10. How is line detected? Explain through the operators