

Code: 9A04802

R09

B.Tech IV Year II Semester (R09) Advanced Supplementary Examinations June/July 2016

DIGITAL IMAGE PROCESSING

(Common to MCT & ECE)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Explain the process of digitizing an image.
(b) Explain how the memory required to store an image is controlled through spatial and gray level resolutions.
- 2 (a) Write about 2D-DFT and its properties.
(b) In spite of high compressed representation and decorrelation why KL transforms are not preferred compared to DCT.
- 3 (a) What are point processing enhancement techniques? Explain.
(b) Explain about histogram equalization.
- 4 (a) With the help of a block diagram, explain the basics of filtering in frequency domain.
(b) Write about homomorphic filtering.
- 5 With the help of an image degradation / restoration model, explain the restoration process and hence explain various methods of estimating the degradation function.
- 6 (a) Discuss how illumination effect the thresholding process used for segmentation.
(b) Write about edge detection and edge linking.
- 7 (a) Differentiate between lossy and lossless image compression models.
(b) Explain transform based image compression techniques.
- 8 Write about full color image processing and hence process of sharpening and smoothening color images.
