Code No: **R42105**   **R10**   Set No. 1

IV B.Tech II Semester Regular/Supplementary Examinations, April – 2015
DIGITAL IMAGE PROCESSING
(Electronics and Instumentation Engineering)
Time: 3 hours   **Max. Marks: 75**
Answer any FIVE Questions
All Questions carry equal marks
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1 a) What are the fundamental steps in Image processing? Explain.   [8]

   b) List out different transforms used in Digital Image Processing? Write the application of each transform.   [7]

2 a) Explain the different types of gray level transformation used for image enhancement.   [8]

   b) What are image sharpening filters? Explain the various types of it.   [7]

3 a) Write any four properties of 2D-DFT.   [8]

   b) Explain how an image can be enhanced using low pass filtering in frequency domain.   [7]

4 a) What is meant by image restoration? Why it is needed? Explain with examples.   [8]

   b) Explain the operation of median filter. How it is used in image restoration.   [7]

5 a) Explain about CMY and YIQ color models.   [8]

   b) Explain about color image smoothing.   [7]

6 a) Explain about wavelet Transform in two dimensions and write the applications.   [8]

   b) Why compression is needed in image processing? Explain.   [7]

7 a) Explain the concept of opening operation.   [8]

   b) Write the applications of gray scale morphology.   [7]

8 a) What is edge detection? Describe in detail about the types of edge detection operation.   [8]

   b) Explain region based segmentation and region growing with an example.   [7]