

GUJARAT TECHNOLOGICAL UNIVERSITY**M.E Sem-II Remedial Examination December 2010****Subject code: 710404****Subject Name: Image Processing****Date: 21 /12 /2010****Time: 02.30 pm – 05.00 pm****Total Marks: 60****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) What do you mean by Image Enhancement? Explain in brief. **06**
(b) Explain Image restoration in detail. **06**
- Q.2** (a) How does the histogram equalization process enhance the image? **06**
(b) Short note: Components of Digital Image Processing. **06**
- OR**
- (b) How an Image sensing and acquisition process can be performed? **06**
- Q.3** (a) Prove that image quality is depends on spatial resolution and gray level resolution. **06**
(b) Image averaging process reduces the noise from Image, Prove. **06**
- OR**
- Q.3** (a) Enlist and explain basic gray level transforms for Image Enhancement. **06**
(b) Wiener Filter. (Short note) **06**
- Q.4** (a) Draw the block diagram of Image enhancement in frequency domain and explain in brief. **06**
(b) Define histogram of an Image and explain its applications. **06**
- OR**
- Q.4** (a) Write a brief note on Laplacian. **06**
(b) Explain the procedure of Histogram matching process for enhancement. **06**
- Q.5** (a) Explain how DCT can be useful in image processing. **06**
(b) Explain the filtering process in spatial domain of an image. **06**
- OR**
- Q.5** (a) Define 2D DFT and explain its properties **06**
(b) Write a short note on JPEG. **06**
