

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E –IIst SEMESTER–EXAMINATION – JULY- 2012

Subject code: 1720104

Date: 10/07/2012

Subject Name: Digital Image Processing

Time: 10:30 am – 13:00 pm

Total Marks: 70

Instructions:

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

- Q.1** (a) Explain Intensity Slicing and Intensity to Color Transformations. **07**
(b) Explain in detail: Components of a general-purpose image processing system. **07**
- Q.2** (a) Describe Image Pyramids. **07**
(b) Describe Color Slicing. **07**
- OR**
- (b) Describe two-band subband coding and decoding system. **07**
- Q.3** (a) Draw and explain functional block diagram of a general image compression system. **07**
(b) Describe Thinning and Thickening. **07**
- OR**
- Q.3** (a) Explain Gaussian noise, Rayleigh noise and Erlang noise. **07**
(b) Describe Spatial and Intensity Resolution. **07**
- Q.4** (a) Describe Histogram Equalization **07**
(b) Explain Adaptive filters. **07**
- OR**
- Q.4** (a) Explain Image Interpolation. **07**
Q.4 (b) Describe Contrast Stretching **07**
- Q.5** (a) What are the types of redundancies available in an image? Discuss with suitable examples. **07**
(b) Explain Bandreject, Bandpass and Notch filters. **07**
- OR**
- Q.5** (a) Explain different color models used in image processing. **07**
(b) Explain pruning **07**
