

**IV B.Tech II Semester Regular/Supplementary Examinations, May 2010  
IMAGE PROCESSING****Computer Science And Engineering****Time: 3 hours****Max Marks: 80****Answer any FIVE Questions  
All Questions carry equal marks**

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1. Give the expression for pdf of the following and plot them
  - i) Rayleigh noise.
  - ii) Gaussian noise.
  - iii) Erlang noise.
  - iv) Exponential noise.
  - v) Uniform noise.
  - vi) Impulse noise. [16]
2. (a) Define autocorrelation coefficients?  
(b) Explain about Psychovisual Redundancy? [8+8]
3. (a) Explain about activation function?  
(b) Explain about perceptron for two pattern classes? [8+8]
4. (a) Give notes on the following:
  - (b) Textural segmentation.
  - (c) morphological gradient.
  - (d) morphological smoothing.
  - (e) Minkowsky addition. [16]
5. (a) Give the conditions (s ) under which the D4 distance between two points p & q is equal to the shortest 4- path between these points. Is this path unique. Explain.  
(b) Explain in detail how digital Image is represented. [16]
6. (a) what effect would setting to zero the higher order bit planes have on the histogram of an image in general.  
(b) Explain why the discrete histogram equalization technique does not. In general yield a flat histogram. [16]
7. Explain in detail the following color Transformations
  - a) Color complements.
  - b) Color slicing.
  - c) Tone and color corrections. [16]

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**R05**

**Set No. 1**

8. (a) Define and Explain about Gaussian noise?  
(b) Explain about edge detection?

[8+8]

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