B. Tech.
(Sem. VIII) Examination, 2006-07
Image Processing

Time: 3 Hours                      [Total Marks: 100]

Note: Attempt all questions

1. Attempt any two parts of following:
   (a) Draw the block diagram of Image Processing System and explain its working.
   (b) Draw the block diagram of vision model and explain its working.
   (c) State and prove the Sampling Theorem as related to image processing.

2. Attempt any two parts of the following:
   (a) What do you mean by image histogram, specification as related to image processing? Explain.
   (b) What different color systems in an imaging system? Explain one of them in detail.
   (c) What do you mean by image filtering? Explain Wiener filter with mathematical relations.

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3 Attempt any two parts of the following:
   (a) What do you mean by image restoration? Classify them explain.
   (b) Define compression ratio, how image compression is obtained. Discuss one coding scheme useful in image compression.
   (c) What do you mean by geometric correction? Explain one technique to achieve geometric correction.

4 Attempt any two parts of the following:
   (a) What do you mean by segmentation? What are different segmentation techniques? Explain one of them in detail.
   (b) How the lines and edge of an image is deleted? Explain.
   (c) Describe a technique for classification of a remotely sensed image.

5 Write short notes on any two:
   (a) Finger Print Classification.
   (b) Image recognition
   (c) Biological call classification.