2006 CALICUT UNIVERSITY
EIGHTH SEMESTER B.TECH ENGINEERING EXAMINATIONS
IMAGE PROCESSING
(ELECTRONICS COMMUNICATION ENGINEERING)

JUNE 2006

TIME::3 HOUR
MARK:100

ANSWER ALL QUESTIONS

PART A [8*5=40]

1. (a) Explain what is meant by point spread function.

(b) Explain what is meant by modulation transfer function.

(c) Explain what is meant by luminance and brigthness.

(d) Explain briefly about image sampling.

(e) State the properties of 2-D DFT

(f) Explain the properties of median filtering.

(g) Explain what is meant by pseudoinverse filtering.

(h) What is Pixel coding ? Explain.

PART B [15*4=60]

2. (a) Draw the block diagram of basic image processing system and explain function of each block in detail.
                    Or
(b) Define 2-D Four-er transform and explain its properties.

3. (a) Draw the block diagram of monochrome vision model and explain in detail with frequency response.

ii Explain co'.vur matching using three primary sources.
                    Or
(b) (i)Explain the limitations of practical sampling and reconstruction systems.

ii) Explain what is meant by optimal sampling of random images.

4. (a) Explain how discrete cosine transform of an image can be computed using DFT.
                    Or
(b) Discuss the various point operations performed for image enhancement.

5. (a) Explain the image restoration scheme using inverse filtering. What are its limitations ?
                    Or
(b) Explain in detail the transform coding technique with neat block diagram.

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