Code No. 5124 / M

FACULTY OF ENGINEERING

B.E. 4/4 (EE) II – Semester (Main) Examination, May / June 2012

Subject : **Image Processing** (Elective – III)

Time : 3 hours Max. Marks : 75

Note: Answer all questions from Part–A and answer any **FIVE** questions from Part–B.

PART – A (25 Marks)

1.	What are the components of image processing systems?	3
2.	Name few applications of digital image processing system	2
3.	What are the basic steps follow in frequency domain?	3
4.	Explain about ideal low pass filter.	2
5.	Give the weights of a mask for a horizontal-line detection.	3
6.	What is meant by image segmentation?	2
7.	Distinguish lossy compression and loss less compression.	3
8.	What is interpinel redundancy?	2
9.	What are three principal ways to estimate the degradation function for use in image restoration?	3
10.	What is pattern and pattern classes?	2

PART – B (50 Marks)

11.a)	Explain the fundamental steps in digital image processing with a neat diagram.	6
b)	Explain simple image formation model.	4
12.a)	Discuss about different laplacian masks used in spatial filtering.	5
b)	List the steps involved in the spatial domain filtering.	5
13.a)	Explain the properties of 2-D DFT.	5
b)	How do you calculate the Fourier transform of sampled functions?	5
14.a)	Explain about histogram equalization.	5
b)	Discuss any two edge detection algorithms.	5
15.	Explain all the details of Huffman coding with an example.	10
16.	Explain about Rayleigh noise and Earlang (gamma) noise.	10
17.	Write short notes on the following :	
a)	Regional description	4