

FACULTY OF ENGINEERING

B.E. 4/4 (CSE) I Semester (New) (Suppl.) Examination, July 2010

Subject: Image Processing (Elective – I)

Time: 3 Hours

Max. Marks : 75

Note: Answer **all** questions from Part A. Answer any **Five** questions from Part B.

PART – A (25 Marks)

1. What is Moire Patterns? 2
2. What are the components of Image Processing System? 3
3. Write about "electromagnetic spectrum". 3
4. What are the basic steps follow in frequency Domain? 3
5. Explain about Ideal Low Pass Filter. 2
6. Explain briefly about Histogram Equalization. 2
7. What is meant by image segmentation? 2
8. Draw the block diagram for general compression model. 3
9. What is meant by noise? 2
10. What is the role of Neural Networks in the Image processing? 3

PART – B (50 Marks)

11. a) Discuss about Image Sampling and Quantization. 5
b) Explain Simple Image Formation model. 5
12. a) Explain in detail about sharpening filters in frequency domain. 6
b) Differentiate Spatial Domain filtering and frequency domain filtering. 4
13. a) Illustrate the Image Segmentation by Global Thresholding.
b) Discuss any two Edge detection algorithms.
14. a) What are the different Image Compression standards?
b) Explain in detail about "Lossy Predictive Coding".
15. a) Explain about Rayleigh noise and Earlang (Gamma) noise.
b) What is meant by Local noise and Global noise?
16. a) Write about the following basic Gray Level Transformations.
(i) Image negatives
(ii) Log transformation.
b) What is meant by local Enhancement?
17. a) Describe the Homo morphic Filtering in frequency domain.
b) Write about Fast Fourier Transform (FFT).