Roll No. .... Total Pages : 2

BT–8/M–24 48432

IMAGE PROCESSING AND RECOGNITION

Paper–OE-CS-AIML-410

Time Allowed : 3 Hours] [Maximum Marks : 75

Note : Attempt **five** questions in all, selecting at least **one** question from each Unit. All questions carry equal marks.

UNIT–I

1. With the help of block diagram explain fundamental steps in digital image processing. 15

2. How is Image Restoration Performed? Also explain constrained and unconstrained restoration methods. 15

UNIT–II

3. Define Segmentation. Explain the region growing approaches to Segmentation. 15

4. What do you understand by Shape analysis? Describe different kinds of Shape descriptors in detail. 15

UNIT–III

5. What do you understand by Pattern recognition? Explain the Design principles of it. 15

48432/K/1094/100 P. T. O.

6. Describe conditional probability. Explain the Bayes' rule and Naïve Bayes classifier. 15

UNIT–IV

7. What do you mean by Dimensionality Reduction? Differentiate between PCA and LDA in detail. 15

8. Describe Hidden Markov Models (HMM) in detail. 15