UNIT-III
5. a) Discuss the correspondence between filtering in the spatial and frequency domains 6
   b) explain the One-Dimensional Fourier Transform and its inverse 6
   OR
6. a) What is meant by Image restoration? Discuss a model of image restoration process 6
   b) Discuss about Bandpass, and Bandreject filters in frequency domains 6

UNIT-IV
7. a) Explain the Hough transform and its applications 6
   b) What is meant by thresholding? Discuss the basic adaptive thresholding 6
   OR
8. a) What is meant by Region-Based segmentation? Discuss any two methods of it 6
   b) Write brief notes on the use of motion in segmentation 6

UNIT-V
9. a) Discuss the Hit-or-Miss Transformation with a suitable example. Discuss various applications of it 6
   b) Discuss about Convex Hull with a suitable example 6
   OR
10. a) Distinguish between thinning and skeleton morphological operations 6
    b) What is meant by object recognition? Write brief notes on Neural Networks 6

[Nov-11]

M.Tech. DEGREE EXAMINATION
Computer Science & Technology
III SEMESTER
IMAGE PROCESSING
(Effective from the admitted batch 2010–11)

Time: 3 Hours Max.Marks: 60

Instructions: Each Unit carries 12 marks.
Answer all units choosing one question from each unit.
All parts of the unit must be answered in one place only.
Figures in the right hand margin indicate marks allotted.

UNIT-I
1. a) Discuss in detail the fundamental steps in digital image processing 8
   b) Describe with an example how a digital image can be represented 4
   OR
2. a) Define the term Resolution, and describe the process of sub sampling to convert a 1024 x 1024 pixels image to 512 x 512 pixels, and 256 x 256 pixels images 6
   b) What is meant by Aliasing? Discuss Moiré pattern effect with an example 6

UNIT-II
3. a) What is meant by image subtraction? Discuss its disadvantages, and applications 6
   b) What is meant by Histogram of an image? Describe clearly the process of histogram equalization 6
   OR
4. a) Discuss the advantages, and disadvantages, of smoothing, and sharpening filters 6
   b) Discuss any three gray level transformations on an image 6

[06/III S/211]
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