13/05/2019

Roll No. .....

37133

Printed Pages : 2

BT–7 / M–19
DIGITAL IMAGE PROCESSING
Paper–ECE–403 N

Time allowed : 3 hours] *[Maximum marks : 75*

Note : *Attempt any five questions by selecting at least one from each unit.*

Unit–I

1. (a) Explain a Luminance, Brightness and Contrast in Digital Imaging. 7½

   (b) Discuss the Image Restoration and Reconstruction from projections applications of Digital Imaging. 7½

2. (a) Discuss Image Analysis and Image Data Compression in detail. 7½

   (b) How colors are reproduced in Color imaging system from a set of light sources. Describe Color Addition and Subtraction in color imaging. 7½

Unit–II

3. Describe two dimensional sampling theory for band limited images. Also discuss reconstruction of the image from its samples. 15

4. Discuss in detail Lloyd-Max Quantizer and its properties. 15

Unit–III

5. Describe various Spatial operations performed on an image. Discuss Spatial Low Pas Filtering, Directional Smoothing in detail. 15

6. Write short note on : 15

   (a) Color Image Enhancement

   (b) Transform Operations

   (c) Clipping and Thresholding

Unit–IV

7. What do you understand by Spatial Feature Extraction ? Why spatial features are important for any image processing application ? Discuss various image analysis techniques used in today's world. 15

8. What do you understand by Boundary Extraction ? Describe 4 and 8 Connectivity, Contour following algorithm for boundary extraction. 15

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