Exam.Code:0970
Sub. Code: 7344

2062

M.E. (Electronics and Communication Engineering)

Second Semester

ECE-1202: Digital Image Processing

Time allowed: 3 Hours Max. Marks: 50

NOTE: *Attempt five questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.*

x-x-x

I. Attempt the following:-

a) Need of image smoothing

b) Concept of convex hull

c) Need of wavelet coding

d) What is color image smoothing

e) Name two region feature descriptors (5x2)

UNIT - I

II. a) With the help of an example, show that 'max' operation whose function is to find the maximum value of the pixels in an image is a nonlinear operation.

b) How gradient operation on an image is used in industrial inspection? Illustrate with an example. (2x5)

III. Explain the principle behind un-sharp masking, high boost filtering and high- frequency-emphasis filtering. (10)

IV. Discuss various interpolation techniques used while zooming and shrinking of an image. (10)

UNIT - II

V. Explain erosion and dilation in morphological image processing in details. (10)

VI. Explain the procedure to construct co-occurrence matrix of an image with the help of an example. (10)

VII. How Hough transform is useful in ascertaining whether a set of pixels lie on curves of a specified shape. (10)

x-x-x