Registration no: | | | | | | | | | | |

Total Number of Pages: 01 **M.Tech**

P2ETCC04

2nd Semester Regular Examination 2016-17

DIGITAL IMAGE PROCESSING

BRANCH(S): COMPUTER ENGG, COMPUTER SCIENCE, COMPUTER SCIENCE AND ENGG, COMPUTER SCIENCE AND TECH., Information Tech Eng, INFORMATION TECH.., TEXTILE CHEMICAL PROCESSING

Time: 3 Hours

Max Marks: 100

Q.CODE:Z961

Answer Question No.1 which is compulsory and any five from the rest.

The figures in the right hand margin indicate marks.

Q1 **Answer the following questions:** (2 x 10)

a) What do you mean by true colour Image
b) Define a binary Image ; for a binary image of 512X512 pixels, calculate its size in KB
c) c)Write MATLAB code to read an RGB image 'cotton.jpg' , covert it into grey scale and display the image
d) Name fewhigh level image processing techniques?
e) How edges have been distinguished in image processing?
f) What do you mean by spatial resolution?
g) What do you mean by Histograms?
h) Explain the Frequencies and its use in low and high passfilters.
i) What is image enhancement
j) Name various major edge finding methods.

Q2 a) Define pixel and voxel. What kind of images you come across in image processing applications? (10)

b) Discuss various image characteristics, What kind of information you can get by asking >> who after reading an image; P= imread('fibre.jpg'); (10)

Q3 a) Discuss various image-processing techniques. (10)

b) Explain various image-processing applications with examples. (10)

Q4 a) Explain various low level & high level image processing techniques. (10)

b) Discuss Contract stretching with MATLAB code (10)

Q5 a) Why image histogram is an important feature extraction technique? (10)

b) What are the applications of histogram in image processing? (10)

Q6 **Write short notes on any two** (10x2)

a) Image correction
b) Image Segmentation
c) edge detection

Q7 a) Explain with MATLAB implemented codes for edge to find edges in intensity image (10)

b) Write a code with example for Canny and sobel and differentiate between two algorithms. (10)

Q8 a) Explain what do you mean by Fourier Transform with examples (10)

b) Describe their applications in image processing. (10)