

Code: 9D06205

M.Tech II Semester Supplementary Examinations August/September 2018

IMAGE & VIDEO PROCESSING

(Common to DSCE, DECS, ECE & Com Sys)

(For students admitted in 2013, 2014, 2015 & 2016 only)

Time: 3 hours

Max Marks: 60

Answer any FIVE questions

All questions carry equal marks

- 1 (a) Explain the representation of a gray scale digital image.
(b) Define the 2D DCT for images and explain its properties.
- 2 Explain a histogram of a gray scale image and describe how histogram processing is used for image enhancement.
- 3 (a) Explain with block diagram the degradation model for image restoration.
(b) Explain the principle of inverse filtering for image restoration.
- 4 Explain the bi-level and multi-level thresholding techniques for image segmentation.
- 5 Explain the information theory perspective for coding images and the fundamental coding theorem.
- 6 (a) Briefly explain the principle of arithmetic coding.
(b) Explain with block diagram the stages of transform coding.
- 7 Describe the representation of a digital video and spatio temporal sampling of video.
- 8 Describe the applications of filters in video processing.
