

Code: R7420502

R7**B.Tech IV Year II Semester (R07) Advanced Supplementary Examinations June 2012****IMAGE PROCESSING****(Computer Science and Engineering)**

Time: 3 hours

Max Marks: 80

Answer any FIVE questions

All questions carry equal marks

- 1 (a) What is meant by digital image processing explain the fundamental steps in digital image processing?
(b) What is the basic idea behind sampling and quantization? Explain it.
- 2 Explain the importance of different gray-level transformation in image enhancement.
- 3 (a) Give some important noise probability density functions. Explain each one.
(b) Explain about spatial filtering.
- 4 Write short note on the following:
(a) Intensity to color transformations.
(b) Color image smoothing.
- 5 (a) With example explain about lossless predictive coding.
(b) Write about Shannon's first theorem.
- 6 (a) Give an expression based on reconstruction by dilation capable of extracting all the holes in a binary image.
(b) Which is the basic tool for shape detection? Explain it.
- 7 Explain the advanced edge – detection methods taking the consideration of image noise and the nature of edges.
- 8 (a) Explain the recognition techniques based on matching.
(b) Write a short notes on neural networks.
