

Code No: C5810**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****M.Tech I - Semester Examinations March/April-2011****IMAGE PROCESSING AND PATTERN RECOGNITION****(COMPUTER SCIENCE AND ENGINEERING)****Time: 3hours****Max.Marks:60****Answer any five questions****All questions carry equal marks**

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- 1.a) Specify the elements of DIP system? (6M)
 b) Explain image sampling and Quantization? (6M)
- 2.a) Explain image restoration in the presence of noise? (6M)
 b) Explain least mean square filter? (6M)
- 3.a) Define thresholding and explain the various methods of thresholding in detail? (6M)
 b) Discuss about region based image segmentation techniques. Compare threshold region based techniques. (6M)
- 4.a) Discuss the concept of Hit –Miss transformation. (6M)
 b) Explain about dilation and erosion. (6M)
- 5.a) Discuss about spectral approaches of texture? (6M)
 b) Discuss in detail structural approaches of texture? (6M)
- 6.a) Define and explain the various representation approaches? (6M)
 b) Explain Boundary descriptors. (6M)
- 7.a) Explain in detail about skeletons. (6M)
 b) Discuss the fundamental problems in pattern recognition system? (6M)
8. Explain the following concepts.
 a) Histogram specification. (4M)
 b) Applications of image processing. (4M)
 c) Least mean square filter. (4M)

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