

R09

Code No: C9302

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.TECH I SEMESTER EXAMINATIONS, APRIL/MAY-2012
IMAGE & VIDEO PROCESSING
(SYSTEMS & SIGNAL PROCESSING)**

Time: 3hours

Max.Marks:60

**Answer any five questions
All questions carry equal marks**

- - -

- 1.a) What is meant by spatial and intensity resolution and explain the effect of reducing spatial and intensity resolution of the image.
- b) What is the usefulness of DWT in Image processing? Give the expression for 2D DWT and explain.
- 2.a) What is meant by image Enhancement? How it is achieved by point processing?
- b) Distinguish between spatial domain techniques and frequency domain techniques of Image enhancement.
- 3.a) What is meant by edge in a digital image? State and explain various edge detection techniques with suitable examples.
- b) What is Thresholding? Explain about Global Thresholding.
- 4.a) What is meant by redundancy and Compression ratio? Classify different types of data redundancies
- b) What is the drawback of Huffman encoding process? How it is overcome in Arithmetic encoding process, explain with an example
- 5.a) Discuss about analog video raster and digital video.
- b) Explain photometric Image formation in detail.
- 6.a) Explain applications of motion estimation in video coding.
- b) Describe Block based transform coding.
7. Describe the following
 - a) Mesh-based motion estimation.
 - b) Multi resolution motion estimation.
8. Write a short note on
 - a) Image formation model.
 - b) Analog Video
 - c) MPEG & H.26X standards.
