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

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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.

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