

Code No: C6104, C6504**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****M.TECH I SEMESTER EXAMINATIONS, APRIL/MAY 2012****IMAGE AND VIDEO PROCESSING****(COMMON TO COMMUNICATION SYSTEMS, WIRELESS & MOBILE COMMUNICATIONS)****Time: 3hours****Max.Marks:60****Answer any five questions
All questions carry equal marks**

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- 1.a) What is meant by sampling? Explain the process of quantization.
- b) What are the applications of Discrete Cosine Transform? Explain them.
- 2.a) Distinguish between continuous wavelet transform and Discrete Wavelet transform.
- b) What is meant by Histogram of an image? Explain with an example, how the Histogram equalization will be done.
3. What are smoothing and sharpening spatial filters? Explain in detail any three of them.
4. What is meant by spatial and temporal redundancy? Discuss about Huffman coding and Arithmetic coding.
- 5.a) Compare the Run length coding and Bit plane coding.
- b) Discuss briefly about three – dimensional motion models.
- 6.a) Explain about photometric Image formation.
- b) Discuss briefly the process of sampling the video signals.
7. Explain clearly the Global motion estimation and the Region based motion estimation methods in detail.
8. Write short notes on the following
 - a) Block based transform coding
 - b) Loss less compression
 - c) Selective filtering
