Code No: R05420502 **R05** **Set No. 2**

IV B.Tech II Semester Regular/Supplementary Examinations,May 2010
IMAGE PROCESSING
Computer Science And Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Draw the truth table using binary operations for the three basic logical operations?
   (b) Explain about reflection and Translation with block diagram? [8+8]

2. Explain in detail about the following color models:
   a) RGB
   b) HSI
   c) CMY. [16]

3. (a) Explain about Role of illumination?
   (b) Define and Explain about Multi-level thresholding? [8+8]

4. Consider the two subsets S1 and S2 shown in the following figure. For V= 1. Determine whether the two subsets are
   a) 4-adjcent b) 8- adjacent or c) m-adjacent.
   Define also the above terms.

0	0	0	0	0	0	1	1	0
1	0	0	1	0	0	1	0	0
1	0	0	1	0	1	1	0	0
0	0	1	1	1	0	0	0	0
0	0	1	1	1	0	0	1	1

5. Explain about the following Geometric Transformations.
   a) Spatial Transformation
   b) Gray level Interpolation. [16]

6. (a) Explain briefly about patterns and pattern classes?
   (b) Explain briefly about feature selection problem? [8+8]

7. (a) Explain about truncated Huffman coding?
   (b) Explain about Arithmetic coding? [8+8]

8. (a) Show that subtraction daplacian from an image is proportional to un sharp masking.

(b) Explain & give the masks for following operators
i) Robert cross-gradient operators.
ii) Sobel operators. [16]

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