Code No: **R41043** **R10** **Set No. 1**

IV B.Tech I Semester Supplementary Examinations, March – 2017

DIGITAL IMAGE PROCESSING

(Common to Electronics & Communication Engineering and Electronics & Computer Engineering)

Time: 3 hours **Max. Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks
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1 a) What are isopreferance curves? Explain the significance of these curves. [8]
b) Explain about Discrete cosine transform and write its properties. [7]

2 a) Discuss about contrast stretching and intensity slicing. [8]
b) Explain spatial correlation with one example. [7]

3 a) Explain about two dimensional sampling and two dimensional sampling theorem. [8]
b) Explain how periodic noise can be removed from image using frequency domain filtering. [7]

4 a) Explain how an image can be restored using Mean filters. [8]
b) What are the various ways to estimate the degradation function? Explain. [7]

5 a) What is chromaticity diagram? Explain how it is useful in color image processing. [8]
b) Explain about color image smoothing. [7]

6 a) Explain about two band subband coding and decoding system. [8]
b) What is meant by image compression? Why it is needed? Explain. [7]

7 a) Explain the following morphological operations:
i) Opening ii) Closing. [8]
b) Explain the concept of hole filling using morphological image processing. [7]

8 a) Explain the various edge models in image segmentation. [8]
b) Explain how the intensity histograms are useful in image segmentation. [7]