M.E. Second Semester (Computer Science & Information Technology) (New-CGS)

13190 : Performance Analysis for Imaging Systems : 2 RNME 2

P. Pages : 2 | **AW - 3878**

Time : Three Hours | Max. Marks : 80

Notes : 1. Due credit will be given to neatness and adequate dimensions.
2. Assume suitable data wherever necessary.
3. Illustrate your answer necessary with the help of neat sketches.
4. Use of pen Blue/Black ink/refill only for writing the answer book.

1. a) Explain basic principals of Imaging systems. **7**

b) Explain three-step Imaging process. **7**

OR

2. a) Explain imaging system components with the help of block diagram. **7**

b) Explain performance analysis for imaging system. **7**

3. a) Explain Image acquisition in detail. **6**

b) Explain threshold vision of aided eye. **7**

OR

4. a) What do you mean by image quality? Explain Image Quality Metric. **6**

b) Explain Target Task Performance (TTP) metric. **7**

5. a) What are benefits of Discrete wavelet transform as compared to other transform? Explain Dyadic & Discrete wavelet transform in detail. **7**

b) State and Explain Differentiation & Integration property of Fourier transform. **6**

OR

6. a) What is image resampling? Explain any image Resampling Model. **7**

b) Explain radically symmetric Filter with a power window. **6**

7. a) What is image super resolution? Explain it in detail. **7**

b) Explain Error-energy reduction algorithm. **7**

OR

8.	a)	Why Image deblurring is important? Explain P-Deblurring filter and its properties.	7
	b)	State & Explain CLEAN algorithm.	7
9.		How contrast enhancement plays an important role in image preprocessing? Explain contrast enhancement method based on wavelet transform.	13

OR

10.	a)	Explain non-uniformity correction with the help of Example.	7
	b)	What are the performance issues in image contrast enhancement.	6
11.	a)	What is image fusion? Explain in brief image Fusion Quality Metrices.	7
	b)	Explain important characteristics of fusion Algorithm.	6

OR

12.	a)	Explain perceptual linearization tone scale technique.	7
	b)	Explain performance measurement in detail related to image fusion quality.	6

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