

HALL TICKET NUMBER

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PACE INSTITUTE OF TECHNOLOGY & SCIENCES::ONGOLE
(AUTONOMOUS)

IV B.TECH I SEMESTER END SUPPLEMENTARY EXAMINATIONS, MARCH-2023

IMAGE PROCESSING

(Common to CSE & CSIT Branches)

Time: 3 hours

Max. Marks: 60

Note: Question Paper consists of Two parts (Part-A and Part-B)

PART-A

Answer **all** the questions in Part-A (5X2=10M)

Q.No.	Questions	Marks	CO	KL
1.	a) What are the applications of image processing?	[2M]	1	1
	b) Mention the need of image enhancement.	[2M]	2	1
	c) List out noise models in image degradation.	[2M]	3	4
	d) Give the image compression standards.	[2M]	4	1
	e) What are the color fundamentals in color image processing?	[2M]	5	1

PART-B

Answer **One Question from each UNIT (5X10=50M)**

Q.No.	Questions	Marks	CO	KL
UNIT-I				
2.	a) Explain the components of an image processing system.	[5M]	1	2
	b) Discuss about the 2-D Discrete Wavelet transforms.	[5M]	1	4
OR				
3.	a) Draw and explain the fundamental steps in digital image processing.	[7M]	1	2
	b) List the properties of 2-D DFT.	[3M]	1	4
UNIT-II				
4.	Explain about the smoothing and sharpening spatial filters.	[10M]	2	2
OR				
5.	a) Discuss about the frequency domain filtering methods.	[5M]	2	4
	b) Explain briefly about the Histogram equalization process.	[5M]	2	2
UNIT-III				
6.	a) With neat diagram discuss the image restoration model.	[5M]	3	4
	b) Explain the least mean square filter for image restoration.	[5M]	3	2
OR				
7.	a) Discuss the minimum mean square error (Wiener) filtering process.	[5M]	3	4
	b) Explain about the constrained least squares filter.	[5M]	3	2
UNIT-IV				
8.	a) Explain the general image compression system with neat diagram.	[5M]	4	2
	b) Discuss about the image segmentation operators.	[5M]	4	6
OR				

9.	a)	Explain about run length coding and bit plane coding.	[5M]	4	2
	b)	Discuss the region-based image segmentation method.	[5M]	4	4
UNIT-V					
10.		Explain in detail about the RGB and HIS color models	[10M]	5	2
OR					
11.		Explain about Pseudo color and full color image processing techniques.	[10M]	5	2
