

SUBJECT: Fundamental of Image Processing
Subject Code: 22CST-317/22ITT-317

Assignment -2

Note:- It contains 2 sets(1 for Even UID/1 for Odd UID)

Set-A

<u>S. no</u>	<u>Questions</u>	<u>Marks</u>	<u>COs</u>
1.	Explain the basic concept of wavelets and how they differ from Fourier transforms.	5 marks	CO4
2.	Discuss common color correction techniques used in image processing. How do these techniques improve the visual quality of images?	5 marks	CO5
3.	Explain the difference between RGB and other color spaces like HSV, YCbCr. Why might different color spaces be used for different image processing tasks?	5 marks	CO4
4.	Discuss how CWT and DWT handle noise in images differently. Provide examples to support your discussion.	5 marks	CO5

Set-B

<u>Set –B</u>				
<u>S. no</u>	<u>Question</u>	<u>Marks</u>	<u>COs</u>	
1.	Explain the significance of multi-resolution analysis in wavelet transformations. Provide an example of how multi-resolution analysis benefits image compression or denoising.	5 marks	CO4	
2.	List and describe the different types of wavelets commonly used in image processing (e.g., Haar, Daubechies, Coiflets, Symlets, etc.).	5 marks	CO5	
3.	For each of the following applications, suggest an appropriate wavelet type and justify your choice: 1. Lossless image compression. 2. Texture analysis in remote sensing images. 3. Edge detection in medical images.	5 marks	CO4	
4.	In medical imaging, color images are sometimes generated through techniques like pseudo-coloring to highlight features that are difficult to see in grayscale. Explain the process of pseudo-coloring and its significance in applications like thermal imaging or blood vessel analysis.	5 marks	CO5	