

Paper Id: 130733

Roll No:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

B.TECH.
(SEM VII) THEORY EXAMINATION 2019-20
DIGITAL IMAGE PROCESSING

Time : 3 Hours**Total Marks : 70***Note: Attempt all sections. If require any missing data; then choose suitably.***Section A****1. Attempt all parts of this question****(2*7=14 Marks)**

- What are different approaches of segmentation?
- What is image? Write the type of images.
- Give the operating nodes for JPEG Format.
- List the drawback of Wiener Filter.
- Compare noisy image with blurred image.
- What do you understand by Weber Ratio? What does low weber ratio indicate?
- What are the issues involved for stereo imaging problem?

Section B**2. Attempt any three question from this section****(7*3=21 Marks)**

- What is image restoration? Draw and explain the basic image restoration. Give two area where image restoration can be applied
- What are linear and non-linear smoothing filters in spatial domains?
- What do you understand by Hit-Miss Transform and why they are used? Explain in brief.
- Describe fundamental operations of morphological image processing.
- Explain Laplacian filters.

Section C**3. Attempt any one question from this Section****(7*1=7 Marks)**

- Explain Physical Aspect of Image Acquisition with diagram in support of your answer.
- What do you mean by digital image representation?

4. Attempt any one question from this Section**(7*1=7 Marks)**

- What is Image Transformation? Explain slant transform.
- Explain Image smoothing in frequency domain filtering.

5. Attempt any one question from this Section**(7*1=7 Marks)**

- Explain periodic noise reduction using band reject filter.
- Explain difference between restoration and enhancement. Does degradation of images result due to both?

6. Attempt any one question from this Section**(7*1=7 Marks)**

- What are different model of image compression? Explain with block diagram/
- Fidelity criteria is used evaluate the information loss during data compression? Explain

7. Attempt any one question from this Section**(7*1=7 Marks)**

- Explain Edge Detection Segmentation technique.
- Explain the rescaling and resampling. Differentiate between thinning and thickening.