

Seat No.	
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B.E. (Electronics & Telecommunication) (Part - IV)
(Semester - VIII) Examination, May - 2019
DIGITAL IMAGE PROCESSING
Sub. Code : 67818

Day and Date : Monday, 20 - 05 - 2019

Total Marks : 100

Time : 10.00 a.m. to 1.00 p.m.

- Instructions :
- 1) All questions are compulsory.
 - 2) Figures to the right indicate full marks.
 - 3) Assume suitable data wherever necessary.

SECTION - I

Q1) Solve any two: [16]

- a) What is meant by histogram of an image? Explain the significance of histogram equalization.
- b) Explain basic relationship between pixels.
- c) Explain linear and non - linear smoothing filters in spatial domain.

Q2) Solve any two: [16]

- a) Explain in detail image sensing and acquisition method.
- b) Explain in detail grey level slicing and bit plane slicing.
- c) Explain high pass filters in frequency domain.

Q3) Solve any two: [18]

- a) Explain unsharp masking and high boost filtering in spatial as well as frequency domain.
- b) Explain Hadamard and Slant transformation.
- c) Explain basic elements of an image processing system.

P.T.O.

SECTION - II

Q4) Solve any two questions.

[18]

- a) Explain morphology with respect to image processing. With suitable small images explain Opening and Closing.
- b) Define image segmentation and discuss any two image discontinuities.
- c) What is image compression discuss inter pixel and psycho visual redundancy.

Q5) Solve any two questions.

[16]

- a) Explain region filling with suitable example.
- b) Explain region segmentation using region growing technique.
- c) Explain lossy predictive coding.

Q6) Solve any two questions.

[16]

- a) Explain thinning and thickening used in morphological processing.
- b) Explain edge models. Explain how Laplacian is used for edge detection?
- c) Explain RGB and HSV color model.

