

No. of Printed Pages : 03

Roll No.

H4

B.Tech. EXAMINATION, May 2019

(Eighth Semester)

(B. Scheme) (Main & Re-appear)

(CSE)

CSE454B

DIGITAL IMAGE PROCESSING

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

(3-18/9) M-H4

P.T.O.

Unit I

1. Draw and explain different components of Digital Image Processing. Also discuss image sensing and acquisition. **15**
2. Discuss the concept of Fourier Transform and Discrete Fourier Transform used in Digital Image Processing. Explain smoothing and sharpening frequency domain filters. **15**

Unit II

3. Explain different color models and color transformation techniques with algorithm. **15**
4. Discuss following in reference to image restoration :
 - (a) Inverse filtering
 - (b) Minimum mean square filtering. **15**

Unit III

5. Explain different types of image compression models with algorithm used in each model. **15**

6. Explain the following in image compression :
 - (a) Edge linting
 - (b) Boundary detection. **15**

Unit IV

7. Explain representation chain codes and boundary descriptors in digital image processing. **15**
8. Write short notes on the following :
 - (a) Skeletons
 - (b) Topological descriptors. **15**