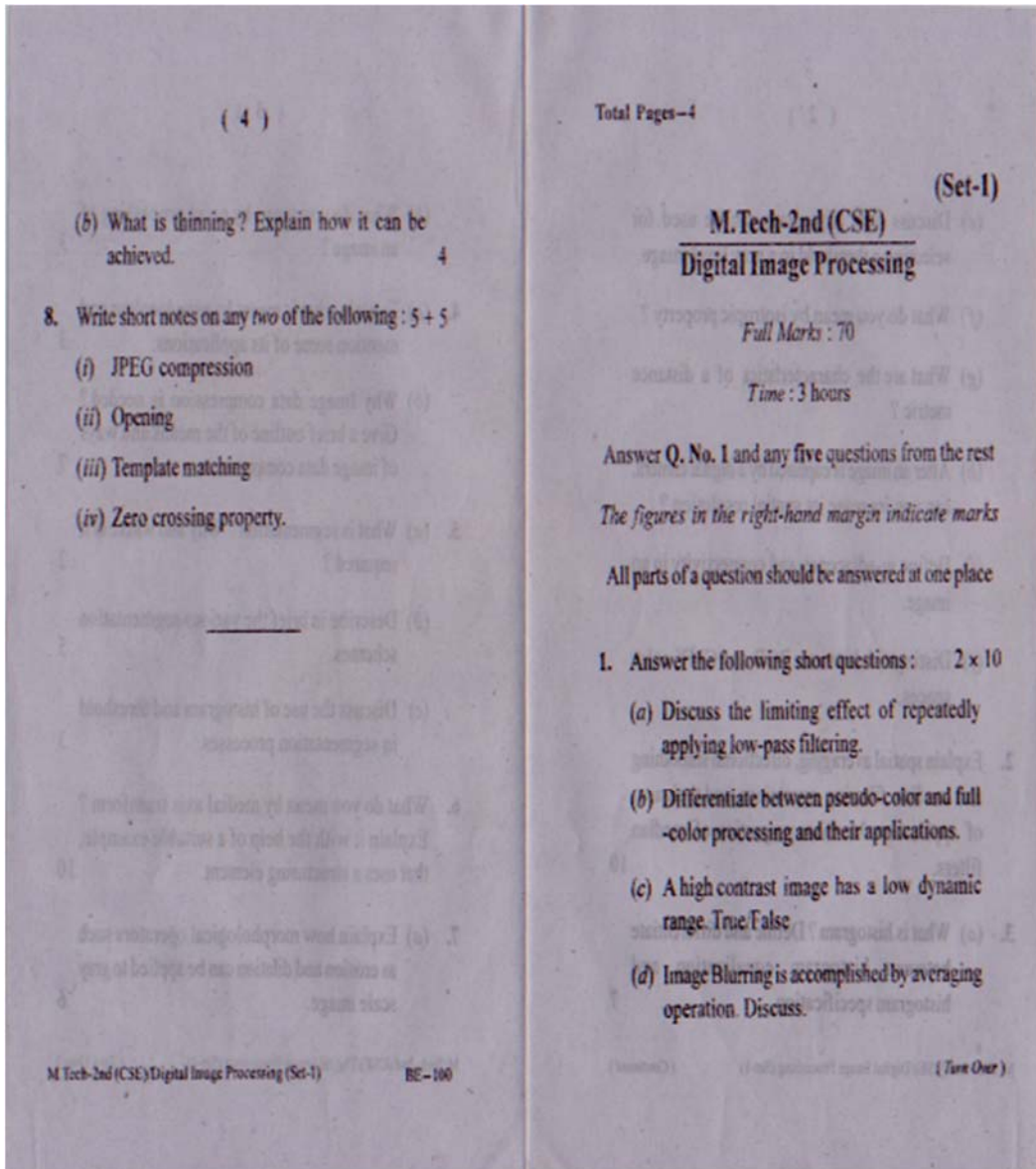


VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY, BURLA  
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
& INFORMATION TECHNOLOGY  
SESSION 2014-2015 (EVEN SEMESTER)



( 2 )

- (e) Discuss how Histogram can be used for selecting a threshold in a gray level image.
- (f) What do you mean by isotropic property ?
- (g) What are the characteristics of a distance metric ?
- (h) After an image is captured by a digital camera, can you increase its spatial resolution ?
- (i) Define  $m$ -adjacency and connectivity in an image.
- (j) Distinguish between RGB and CMY color spaces.
2. Explain spatial averaging, directional smoothing and median filtering operations and their area of application. Mention properties of median filters. 10
3. (a) What is histogram ? Define and differentiate between histogram equalization and histogram specification. 7

( 3 )

- (b) What do you mean by point processing of an image ? 3
4. (a) Explain what is meant by pseudocolour and mention some of its applications. 3
- (b) Why Image data compression is needed ? Give a brief outline of the means and ways of image data compression. 7
5. (a) What is segmentation ? Why and where is it required ? 2
- (b) Describe in brief the various segmentation schemes. 5
- (c) Discuss the use of histogram and threshold in segmentation processes. 3
6. What do you mean by medial axis transform ? Explain it with the help of a suitable example, that uses a structuring element. 10
7. (a) Explain how morphological operators such as erosion and dilation can be applied to gray scale image. 6