

Total No. of Questions : 8]

SEAT No. :

P2039

[Total No. of Pages : 2

[5059]-644

B.E. (Computer Engineering)
IMAGE PROCESSING
(2012 Pattern) (Semester - I)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Answer Que. 1 or Que. 2, Que. 3 or Que. 4, Que. 5 or Que. 6, Que. 7 or Que. 8,*
- 2) *Neat diagram should be drawn wherever necessary.*
- 3) *Use of electronic pocket calculator is allowed.*
- 4) *Assume suitable data, if necessary.*

- Q1)** a) Explain the steps involved in Image digitization in detail. [8]
- b) What do you mean by Image file format? Mention the name and use of frequently used file format. [6]
- c) Discuss how the point and mask processing operation helps in image enhancement? [6]

OR

- Q2)** a) What is the role of image segmentation in image processing? What are meant by global, local and adaptive thresholds? What approach of thresholding should be used in case of non-uniform illumination? [8]
- b) Explain in brief Human Visual system in relation with Image Processing. [6]
- c) Explain region split and merge technique with example and draw its quad tree representation. [6]
- Q3)** a) What is the need for Image compression? Explain Huffman code with example. [8]
- b) What is the need of Object recognition. State and explain automated object recognition system. [8]

P.T.O.

OR

- Q4)** a) Explain any two object recognition method. [8]
b) What is mean by lossless and lossy image compression? Discuss any method from lossy image compression. [8]

- Q5)** a) What are the medical Imaging modalities? Explain in brief. [10]
b) How could the contrast of a displayed X-ray computed to mammography image be increased? Explain. [8]

OR

- Q6)** Write a short note on any three : [18]
a) Images from X-rays and its application.
b) Images from r-rays.
c) Image enhancement in mammography.
d) PACS.

- Q7)** a) Explain different stereo imaging concepts from satellites. [8]
b) Explain in brief elements of visual image interpretation. How these elements help us to interpret remote sensing imagery? [8]

OR

- Q8)** Write shorts note on any two : [16]
a) Remote sensing process and it's application.
b) Photogrammetric Imaging devices.
c) Block triangulation.

