

Exam. Code : 208602

Subject Code : 5284

M.Sc. Information Technology 2nd Semester

IMAGE PROCESSING

Paper—MIT-203

Time Allowed—3 Hours]

[Maximum Marks—100

Note :— Attempt any **FIVE** questions. Each question carries equal marks.

1. Define the term Image Processing. Explain different steps used in Image Processing. Also discuss different available image data formats. 20
2. What do you understand by Image Transformation ? Discuss at least one type of transformation in detail. 20
3. What do you understand by Image Smoothing ? Discuss how Low Pass Filtering and Median filtering help in smoothing the image. 20
4. What do you mean by Image Restoration ? Discuss different techniques used for Image Restoration. Explain at least one in detail. 20
5. Define the following terms :
 - (a) Image Sharpening
 - (b) Image Encoding
 - (c) Image Segmentation
 - (d) Image Filtering. 4×5=20

6. (a) What is Gray Level Interpolation ? Explain the schemes involved in it. 10
- (b) Explain the concept of Global Thresh holding by citing an example. 10
7. Write short notes on :
- (a) Inverse Filtering
- (b) Least Square Error Filtering
- (c) Texture
- (d) Region Representation. $4 \times 5 = 20$
8. Define the following :
- (a) Image Observation
- (b) Spatial Feature Extraction
- (c) Boundary Extraction
- (d) Image Understanding. $4 \times 5 = 20$