

Exam. Code : 208602

Subject Code : 4669

M.Sc. Information Technology Semester—II

MIT-203 : IMAGE PROCESSING

Time Allowed—3 Hours] [Maximum Marks—100

Note :- Attempt any **five** questions. Each question carries equal marks.

1. Explain the term Image Digitization. Discuss different technologies involved in Image Digitization. Also write the properties of a digital image. 20
2. What do you understand by Image Transformation ? Discuss Discrete Fourier Transformation in detail with suitable example. 20
3. What do you understand by Image Sharpening ? Discuss how High Pass Filtering and Differentiation technique help in sharpening the image. 20
4. Define the following :
 - (a) Image restoration
 - (b) Image Encoding. 2×10
5. Explain the process of detection of discontinuation by point detection, line detection and edge detection with the help of an example. 20

6. Define the following :
- (a) Image Observation
 - (b) Spatial Feature Extraction
 - (c) Boundary Extraction
 - (d) Image Understanding. 4×5
7. (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
8. Write short notes on :
- (a) Weiner Filtering
 - (b) Least Square Error Filtering
 - (c) Texture
 - (d) Moment Representation. 4×5