Roll No. ..... Total Pages : 2

BT-8/M-20 38238

DIGITAL IMAGE PROCESSING

Paper–EEN-426-N

Option-I

Time Allowed : 3 Hours] [Maximum Marks : 75

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

UNIT–I

1. What do you understand by Sampling? With the help of an example, describe the process of sampling and quantization of images. 15

2. State two dimensional discrete Fourier transform. Explain its properties. 15

UNIT–II

3. Differentiate between Spatial filtering and Frequency domain filtering. Explain atleast one image enhancement technique in each domain. 15

4. Explain different image compression models in detail. 15

UNIT–III

5. (a) What do you mean by Image degradation and Restoration process? Explain various noise filters in detail. 10

   (b) Explain inverse filtering. 5

6. What is Image segmentation? Describe some popular algorithms for edge linking and boundary detection. 15

UNIT–IV

7. Write short notes on each of the following :

   (a) Boundary descriptors.

   (b) Regional descriptors.

   (c) Morphology.

8. What is the use of Image representation and recognition methods? With the help of an example, explain the run length and tree appraoches for image representation. 15