333672(33)

BE 6th Semester (New Scheme)

Examination April-May 2020

Branch: Information Technology

Image Processing

Time Allowed : Three Hours

Maximum Marks : 80 **Passing Marks : 28**

Note: Par (a) of each question is compulsory. Attempt any two parts from (b), (c) and (d) of all questions. (a) part carries 02 marks and (b), (c) and (d) carry 07 marks each.

1. (a) Explain Digital Image Processing.
   (b) What is filter? Also explain types of filter in short.
   (c) Explain various image enhancement techniques.
   (d) Write short note on : (Any two)
   (i) canny edge detector
   (ii) spatial level resolution
   (iv) histogram specification

2. (a) Explain thrash holding.
   (b) Explain edge detection technique and also explain edge linking and boundary detection.
   (c) Differentiate between Gaussian low pass filter and high pass filter.
   (d) Explain line detection mechanism in image processing.

3. (a) What is Morphological Image processing?
   (b) Explain dilation and Erosion in morphological image processing.
   (c) Define application based boundary extraction.
   (d) Write short note on connected component extraction.

4. (a) What are different types of image compression techniques?
   (b) Explain Huffman coding in detail.
   (c) Write short note on Lossy image compression techniques.
   (d) What are the various video compression Techniques. Explain each in short.

5. (a) What is image representation?
   (b) Write short note on boundary descriptors.
   (c) Define feature based stereo correspondence.
   (d) Write short note on :
   (i) shape from motion
   (ii) optical flow