Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University)Coimbatore-641043.

Master's Degree Examination – November 2018
III Semester

Class : II PG **Time: 3 hours**
Major : Computer Science **Max. Marks: 60**

17MCSC16 Digital Image Processing

Part A **10 x 1/2 = 5**

Choose the correct answer

1.Initial step in any image processing technique is

a. Segmentation b. Marking c. Image acquisition d. Normalization

2. The field of digital image processing refers to processing digital image by means of

a. Digital computer b. Super computer c. Microcomputer d. Mini computer

3.Histogram is a technique processed in_____

a. Intensity Domain b. Frequency Domain c. Spatial Domain d. Undefined Domain

4. DPI stands for

a. Dots per image b. Dots per inch c. Dots per intensity d. Diameter per inch

5.Smoothing filters are mostly used in_____

a. Blurring b. Noise Reduction c. Contrast d. Both a and b

6. Images can be blurred using_____

a. Low pass filter b. Contouring c. Erosion d. High pass filter

7.Sobel gradient is not good for detection of _____

a. Horizontal lines b. Vertical lines c. Diagonal lines d. Edges

8_____ is the gradient computation equation.

a.|Gx|+|Gy| b. |Gx|-|Gy| c. |Gx|/|Gy| d. |Gx|*|Gy|

9.Dilation followed by erosion is called

a. Opening b. Closing c. Blurring d. Translation

10.Subimages used to probe the image is called_____

a. Pixels b. Frames c. Structuring elements d. Coordinates

Part B — 5 x 4 = 20

Answer ALL questions

Each answer should not exceed 200 words or one page

11.a. Describe the TIFF images and its uses.

(Or)

11.b. Describe the PNG images and its uses.

12.a. Discuss about Key features of ImageJ.

(Or)

12.b. What is an Image Defects? Explain

13.a. Write a short note on Modifying Image Intensity.

(Or)

13.b. What is Linear Filter? List out the types.

14.a. Outline the Gradient-Based Edge Detection.

(Or)

14.b. Describe the Local Structure Matrix for Harris Corner Detector.

15.a. Discuss about Detecting simple curves Salient Structures.

(Or)

15.b. Discuss about the applications of Morphological Operations.

Part C — 5 x 7 = 35

Answer ALL questions

Each answer should not exceed 600 words or three pages

16.a. Explain briefly about Crunching Pixels.

(Or)

16.b. Explain the various types of Digital Images.

17.a. Explain briefly about Image manipulation and Processing.

(Or)

17.b. What is Histogram? Explain interpreting and computing histograms.

18.a. Explain in detail about Histogram Specification.

(Or)

18.b. Compare the types of Nonlinear Filters.

19.a. Explain in detail about Edge Operators.

(Or)

19.b. Examine about Harris Corner Detector.

20.a. Examine about Implementing the Hough Transform.

(Or)

20.b. Compare the Basic Morphological Operations.