Code No. D-0412

FACULTY OF INFORMATICS

M.C.A. (CBCS) III-Semester (2 Years Course) (Main)
Examination, April 2022

Subject: Image Processing (E2)

Time: 3 Hours **Max. Marks: 70**

(Missing data, if any, may be suitably assumed)

Note: Answer any five questions from the following.
All questions carry equal marks.

1 a) What is digital image processing? Explain the need of it.
b) Describe the various fundamental steps in digital image processing.

2 a) Discuss about image Acquisition using sensor strips with a neat diagram.
b) Explain about Image Acquisition using sensor Arrays.

3 a) Explain about two-dimensional Fourier transform properties.
b) Describe about fast Fourier Transform in detail.

4 a) Give an overview on KL Transform.
b) Explain Discrete wavelet Transform.

5 a) Write about Image Enhancement in detail.
b) Discuss in brief about Basic Gray level Transformation.

6 a) Write about Smoothing frequency domain filters.
b) Explain about homomorphic filtering.

7 a) What do you mean by Image Restoration? Explain
b) Write about Unconstrained and Constrained Restoration.

8 a) Explain about Region based Segmentation.
b) Describe the use of Motions in segmentation.

9 a) Give an overview Transmission Tomography with a neat diagram.
b) Explain about Emission Tomography.

10 a) Write the definition and remarks of Back Projection Operator.
b) Discuss in brief about Projection Theorem.

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