24P451 (Pages: 2) Name: .....

Reg.No: .....

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2026

(CBCSS - PG)

(Regular/Supplementary/Improvement)

CC19PCSS4E04A - DIGITAL IMAGE PROCESSING

(Computer Science)

(2019 Admission onwards)

Time : 3 Hours Maximum : 30 Weightage

Part-A

Answer any ***four*** questions. Each question carries 2 weightage.

1. Discuss elements of digital image processing systems.
2. Illustrate Linear Filtering and Spatial Filter Masks.
3. Describe Laplacian in frequency domain.
4. Describe estimation of noise parameters.
5. Explain chain codes.
6. Explain arithmetic coding.
7. Discuss Lossless compression.

(4 × 2 = 8 Weightage)

Part-B

Answer any ***four*** questions. Each question carries 3 weightage.

8. Explain spatial and intensity resolution and image interpolation.
9. Discuss KL transformation.
10. Discuss histogram equalization.
11. Describe image sharpening using Gradient.
12. Conclude constrained least mean square filtering.
13. Conclude thresholding.
14. Explain transform coding.

(4 × 3 = 12 Weightage)

Part-C

Answer any ***two*** questions. Each question carries 5 weightage.

15. Explain basic relationship between pixels.

16. Describe DFT and DCT.

17. Explain frequency domain filtering.

18. Explain fundamental concepts of image compression.

(2 × 5 = 10 Weightage)

****