21P453 (Pages: 2) Name: .....

Reg.No: .....

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2023

(CBCSS - PG)

(Regular/Supplementary/Improvement)

CC19P CSS4 E04a - 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. Explain elements of digital image processing systems.
2. Discuss Linear Filtering and Spatial Filter Masks.
3. Discuss Unsharp Masking and Highboost Filtering.
4. Discuss model of the Degradation/Restoration process.
5. Conclude edge detection.
6. Explain Spatial and temporal redundancy.
7. Discuss Lossless compression.

(4 × 2 = 8 Weightage)

Part-B

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

8. Illustrate spatial and intensity resolution and image interpolation.
9. Illustrate Hadamard transformation.
10. Illustrate histogram equalization.
11. Describe homorphic filtering.
12. Conclude constrained least mean square filtering.
13. Illustrate region based segmentation.
14. Illustrate transform coding.

(4 × 3 = 12 Weightage)

Part-C

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

15. Explain basic relationship between pixels.

16. Conclude DFT and DCT.

17. Describe frequency domain filtering.

18. Describe Huffman coding and arithmetic coding.

(2 × 5 = 10 Weightage)

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