

18P454

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Name:

Reg. No.....

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2020

(CUCSS - PG)

(Computer Science)

CC17P CSS4 E01a – DIGITAL IMAGE PROCESSING

(2017 Admission)

Time: Three Hours

Maximum: 36 Weightage

PART A

Answer *all* questions. Each question carries 1 weightage.

1. Define Pixel.
2. What is fieldility criteria?
3. What is an image?
4. Define compression.
5. What are order static filters?
6. What is histogram matching?
7. Define Quantization.
8. List the applications of transform.
9. What is JPEG?
10. Write the expression of one-dimensional Discrete Fourier Transforms.
11. What do you meant by grey level.
12. What is homomorphic filtering?

(12 x 1 = 12 Weightage)

PART B

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

13. Differentiate lossy and lossless compression.
14. Define Walsh Transform and write its properties.
15. Explain DCT.
16. Discuss the elements of visual perception.
17. Explain image smoothing using frequency domain filters.
18. Explain Histogram equalization.
19. Explain the properties of DFT.
20. Explain Huffman coding.
21. Explain distance measures.

(6 x 2 = 12 Weightage)

PART C

Answer any *three* questions. Each question carries 4 weightage

22. Explain fundamental steps in image processing.
23. Explain least mean square filtering.
24. Explain sharpening spatial filters.
25. Explain the basics of intensity thresholding in image segmentation.
26. a) Discuss how the various filter masks are generated to sharpen images in spatial filters.
b) Illustrate homomorphic filtering approach for image enhancement.
27. Explain lossy compression techniques.

(3 x 4 = 12 Weightage)
