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G 6175 (Pages 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY/JUNE 2009

Eighth Semester

Branches : Electronics and Communication Engineering / Applied Electronics and Instrumentation / Electronics and Instrumentation Engineering

DIGITAL IMAGE PROCESSING (Elective III) (LAS)

(Regular/Supplementary)

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*
Each question carries 4 *marks.*

1. Explain basic principle of image representation and image characterization.
2. Explain mechanism of perception of Vision of human eye.
3. Give any *two* properties of unitary image transform.
4. Define 2D-DFT and its inverse transform.
5. Describe contrast modification methods used to modify an image.
6. With sketch of transformation graph, define digital negative of an image.
7. What is blind deconvolution ? Explain how it is employed in image restoration.
8. Discuss basic principles of image analysis and vision.
9. Discuss threshold coding technique and give its merits over zonal coding.
10. Describe Run length coding method.

(10 × 4 = 40 marks)

Part B

Answer **all** *questions.*
Each question carries 12 *marks.*

11. Describe in detail sampling and quantization of 2D-images.

Or

12. With block diagram, explain the color vision model.
13. Define Haar Transform and explain its properties.

Or

Turn over

Board exam question paper, sample paper, model paper, to read and download

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14. Explain KL Transform and its properties.

15. With mathematical modeling and block diagrams, analyse histogram equalization, modifica and specification.

Or

16. Explain with block diagram, image enhancement using transform filtering.

17. Explain with block diagram, digital image restoration model.

Or

18. With block diagram, explain image restoration scheme using Wiener filter.

19. Explain lossless prediction technique used for image compression.

Or

20. Compare and contrast JPEG and MPEG compression standards in all respects.

(5 × 12 = 60 ma

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