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Question Paper Code: 49410

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Elective

Electronics and Communication Engineering

14UEC910 - DIGITAL IMAGE PROCESSING

(Regulation 2014)

Duration: 1:15hrs

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. Amount of energy that flows from the light source is
 - (a) Brightness
 - (b) Radiance
 - (c) Luminance
 - (d) Reflectance
2. Intensity levels in 8-bit image are
 - (a) 128
 - (b) 255
 - (c) 256
 - (d) 512
3. Smoothing filters are mostly used in
 - (a) Blurring
 - (b) Noise reduction
 - (c) Contrast
 - (d) A and B
4. The method used to generate a processed image that has a constant histogram is called
 - (a) Histogram enhancement
 - (b) Histogram matching
 - (c) Histogram normalization
 - (d) Histogram equalization
5. Image restoration and image enhancement is performed in
 - (a) Both the spatial and frequency
 - (b) Both frequency and time
 - (c) Only frequency domain
 - (d) Only spatial domain

6. Minimum mean square error filter is otherwise called as
(a) Low pass filter (b) High pass filter (c) Inverse filter (d) Least square filter
7. Canny edge detector is
(a) Isotropic detector (b) Non isotropic detector
(c) Does not produce long thin contours (d) Uses the second derivative
8. Gradient computation is more useful in
(a) Point detection (b) Edge detection (c) Area detection (d) Line detection
9. The Hit-or-Miss transformation is used for shape _____
(a) Removal (b) detection (c) Compression (d) Decompression
10. Third moment is defined as the mean of
(a) Flatness (b) Skewness
(c) Sharpness (d) Variability of the image

PART – B (3 x 8 = 24 Marks)

(Answer any three of the following questions)

11. Explain in detail elements of visual perception. (8)
12. Write notes on smoothing spatial filtering (8)
13. Describe in detail the geometrical transformation applied to the pixels to restore the image.. (8)
14. Summarize region based image segmentation techniques. (8)
15. Explain in detail various image representation approaches (8)

