Reg. No. : | | | | | | | | | | |

Question Paper Code: 39410

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2019

Elective

Electronics and Communication Engineering

01UEC910 - DIGITAL IMAGE PROCESSING

(Regulation 2013)

Duration: 1.15 hrs 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 thee 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 detacher is

(a) Isotropic defector (b) Non isotropic defector

(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 meaner 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. Define 2D DFT pair and discuss any three properties of it. (8)

13. Give an algorithm for obtaining the average of four images of same size and explain it. (8)

14. How do you link pixels through global processing ? How do you perform edge detection? Give suitable algorithm and discuss how the edge points are linked. (8)

15. Formulate the Chain codes & Skeletons. (8)