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| 1 | The edge detector which uses non-maximum suppression to thin edges is the …......  a. Robert operator  b. Canny Operator  c. Prewitt Operator  d. Sobel Operator  Answer: (b) Canny Operator |
| 2 | \_\_\_\_\_ is the total amount of energy that flows from light source.  a. Radiance  b. Darkness  c. Brightness  d. Luminance  Answer: (a) Radiance |
| 3 | What are the two approaches to segmentation?  a. Haar-like feature & 3-D rectangle approach  b. Region based segmentation & edge segmentation  c. Adaboost approach & edge segmentation  d. Fit and split Segmentation  Answer: (b) Region based segmentation & edge segmentation |
| 4 | Pixels are allocated to categories according to the range of values in which a pixel lies is called...............  a. Thresholding based segmentation  b. Edge- based segmentation  c. Region based segmentation  d. Region Growing Segmentation  Answer: (a) Thresholding based segmentation |
| 5 | Which segmentation technique is based on clustering approaches?  a. K-means algorithm  b. Threshold based algorithm  c.  Histogram based algorithm  d. Edge detection based algorithm  Answer: (a) K-means algorithm |
| 6 | Zero crossing operator use the following............  a. First derivative  b. Second derivative  c.  Sobel operator  d.  Gaussian operator  Answer: (b) Second derivative |
| 7 | Classical edge detectors uses.............  a. Prewitt operator  b. Robert operator  c.  Threshold operator  d.  Gaussian operator  Answer: (a) Prewitt operator |
| 8 | Gray level image segmentation is generally based on two properties.............  a. Discontinuity and similarity  b. Continuity and similarity  c.  Only similarity  d.  Continuity and Discontinuity  Answer: (a) Discontinuity and similarity |
| 9 | Edge based segmentation algorithm is using.............  a. Discontinuity and similarity  b. Threshold value  c.  None of the above  d.  Edge linking and boundary  Answer: (d) Edge linking and boundary |
| 10 | In Canny edge detection, we will get more discontinuous edges if we make the following change to the hysteresis thresholding:  a. increase the high threshold  b. decrease the high threshold  c.  increase the low threshold  d.  decrease the low threshold  Answer: (c)  increase the low threshold |
| 11 | When applying a Hough transform, noise can be countered by................  a. a finer discretization of the accumulator  b. increasing the threshold on the number of votes a valid model has to obtain c.  decreasing the threshold on the number of votes a valid model has to obtain  d.  considering only a random subset of the points since these might be inliers  Answer: (b)  increase the low threshold on the number of votes a valid model has to obtain |
| 12 | The range image has pixel values that correspond to the………..  a. Intensity  b. Distance  c.  Height  d.  Texture  Answer: (b)  Distance |
| 13 | The kernel used to Design Sobel Filter is …………………  a. [0, 1, 1 ; -1, 0, 1 ; -1, -1, 0]  b.  [0, -1, -1 ; 1, 0, -1 ; 1, 1, 0]  c.  [0, 1, 2 ; -1, 0, 1 ; -2, -1, 0]  d.  [-1, -1, -1; 0, 0, 0; 1, 1, 1]  Answer: (c)  [0, 1, 2 ; -1, 0, 1 ; -2, -1, 0] |
| 14 | In Canny Edge Detection algorithm, Let us assume a point of M(i,j). The edge magnitude M(i1,j1) and M(i2,j2) of two neighboring pixels that falls on the same gradient direction, are considered. If the magnitude of the point M(i,j) is greater than the magnitude of the points M(i1,j1) or M(i2,j2), then the value is ………………….  a. Replaced by zero  b.  Replaced by M(i1, j1)  c.  Replaced by M(i,j)  d.  Replaced by M(i2,j2)  Answer: (c)  Replaced by M(i,j) |
| 15 | Apply the Mask=[-1,-1,-1; 2, 2, 2; -1, -1, -1] on the first row of the given image f(x,y)=[1, 2, 3; 2, 2, 1; 1, 2, 0]. Find out the output image.  a. [1, 7, 4; 2, 2 1; 1, 2, 0]  b.  [4, 7, 7; 2, 2, 1; 1, 2, 0]  c.  [4, 6, 6; 2, 2, 1; 1, 2, 0]  d.  [4, 7, 6; 2, 2, 1; 1, 2, 0]  Answer: (b)  [4, 7, 7; 2, 2, 1; 1, 2, 0] |
| 16 | If pixel (x’, y’) is not with in the neighborhoodof pixel (x,y). Then Which technique is used to link pixel (x, y) with pixel (x’,y’).  a. LOG Technique  b.  Canny Edge detection  c.  Gradient Operator  d.  Hough Transform  Answer: (d)  Hough Transform |
| 17 | In Canny Edge Detection algorithm, Let us assume a point of M(i,j). The edge magnitude M(i1,j1) and M(i2,j2) of two neighboring pixels that falls on the same gradient direction, are considered. If the magnitude of the point M(i,j) is less than the magnitude of the points M(i1,j1) or M(i2,j2), then the value is ………………….  a. Replaced by zero  b.  Replaced by M(i1, j1)  c.  Replaced by M(i,j)  d.  Replaced by M(i2,j2)  Answer: (a)  Replaced by zero |
| 18 | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_is the position of sign change of the first derivative among neighboring points.  a. edge  b.  Zero-Crosing  c.  point  d.  line  Answer: (b)  Zero-Crosing |
| 19 | The Hough Transform is used to fit points as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  a. line  b.  edge  c. curve  d.  ROI  Answer: (c)  curve |
| 20 | In Canny Edge detection algorithm, Assume Upper threshold value is 1.5 and lower threshold value is 0.75. Pixel having values 0.8 will be considered as ………….  a. Weak edge  b.  Strong edge  c. false edge & replace by zero  d.  Weak edge & replaced by zero  Answer: (a)  Weak edge |
| 21 | Consider the Laplacian filter. It provides the following at any pixel in an image.  a. Gradient in y direction  b.  Gradient in x direction  c. Strength and direction of edges  d.  Curvature  Answer: (d) Curvature |
| 22 | If the image is noisy, what kind of filter should be applied to the image before applying the Laplacian filter in LoG.  a. A high pass filter  b.  A low pass filter  c. A gradient filter  d.  High Boost Filter  Answer: (b) A low pass filter |
| 23 | In Canny Edge detection algorithm, Assume Upper threshold value is 1.5 and lower threshold value is 0.75. Pixel having values less than 0.75 will be considered as ………….  a. Weak edge  b.  Strong edge  c. false edge & replace by zero  d.  Weak edge & replaced by zero  Answer: (c) false edge & replace by zero |
| 24 | Consider an image on which the Laplacian filter is applied for edge Detection. An edge in the image corresponds to the following in the Filtered image.  a. Zero Crossings  b.  Zeros  c. Maxima  d.  Minima  Answer: (a) Zero Crossings |
| 25 | Canny edge detector removes spurious edges by ……………..  a. Hysteresis  b.  Non-maxima Suppression  c. Low pass filtering  d.  Finding zero crossings  Answer: (b) Non-maxima Suppression |
| 26 | In Harris Corner detection method if R=[A, B ; C, D],  The eigen values of this matrix R characterize edge strength, and the eigen vectors represent the edge orientation. Assume  λ1   &  λ2  be the eigen values, then If λ1  is high and λ2 is small or vice versa then it represents…………………………  a. Flat Region  b.  Corner  c. Edge  d.  Flase Edge  Answer: (c) Edge |
| 27 | Canny edge detector removes streaking or broken edges by  …………………..  a. Hysteresis  b.  Non-maxima Suppression  c. Low pass filtering  d.  Finding zero crossings  Answer: (a) Hysteresis |
| 28 | In stereo Vision**, m=3** is the distance between the two eyes, **D=12**is the distance between the right eye and the star, **l=2**is the left separation, **r=7**is the right separation. Calculate the Depth Information?  a. 10  b.  14  c. 20  d.  45  Answer: (c) 20 |
| 29 | In stereo Vision**,**Depth Information**=16** is the distance between the two eyes, **D=12**is the distance between the right eye and the star, **l=3**is the left separation, **r=11**is the right separation. Calculate the distance between two eyes ‘m’?  a. 5  b.  7  c. 8  d.  6  Answer: (d) 6 |