Register Number | | | | | | | | | | |

Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam – 603 110

(An Autonomous Institution, Affiliated to Anna University, Chennai)

Department of Computer Science and Engineering

Continuous Assessment Test – ~~I~~ / ~~II~~ / III

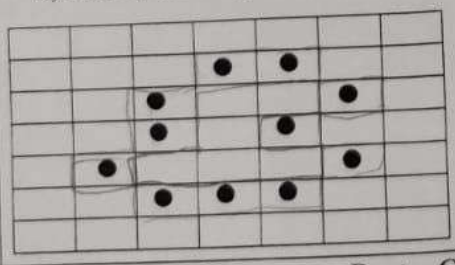
Question Paper

Degree & Branch	BE & CSE				**Semester**	6
Subject Code & Name	UCS1623 – IMAGE PROCESSING AND ANALYSIS				**Regulation:**	2018
Academic Year	2021-2022	**Batch**	2019-2023	**Date**	07-06-2022	FN / ~~AN~~
Time: 8.30 AM to 10.00 AM	**Answer All Questions**				**Maximum: 50 Marks**	

Part – A (6×2 = 12Marks)

<KL1>	1. List the drawbacks of Inverse filtering.	<CO3>
<KL1>	2. What is Otsu's thresholding?	<CO3>
<KL3>	3. Does the use of chain code compress the description information of an object contour? Justify.	<CO4>
<KL3>	4. What happens to the signature, if a rectangular object is rotated? Will it remain same as before? Justify.	<CO4>
<KL1>	5. List the advantages of quadtrees?	<CO5>
<KL1>	6. List the descriptors that can be used for content-based image retrieval.	<CO5>

Part – B (3×6 = 18 Marks)

<KL2>	7. Discuss periodic noise reduction using frequency domain filtering in digital image processing.	<CO3>
<KL3>	8. Apply Hough transform to show that the following points are collinear. Also find the equation of the line. (1,2), (2,3) and (3,4)	<CO4>
<KL3>	9. a) Find the order of the shape number for the figure shown using 8-chain code technique. b) Obtain the shape number. 	<CO5>

Part – C (2×10 = 20 Marks)

<KL3>	10. Compute the co-occurance matrix for the given image for the configuration of relative position as Q = (dx, dy) = (0, 1). 0 0 1 1 1 0 0 1 1 1 0 2 2 2 2 2 2 3 3 3 2 2 3 3 3	<CO5>

	Apply the following Haralick descriptors to extract the relevant information in order to compare the textures. i. Maximum Probability ii. Correlation iii. Contrast iv. Uniformity	
	(OR)	
<KL3>	11. Apply Split and Merge operations for the given image whose gray level range from 0-8 and threshold $T \leq 3$. 6 7 1 3 8 6 5 4 8 8 5 6 7 8 6 6	<CO4>
<KL2>	12. Explain in detail about the concept of Fourier descriptors with an example.	<CO5>
	(OR)	
<KL2>	13. Explain in detail about the texture descriptor to quantify the image.	<CO5>
