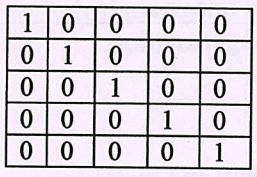
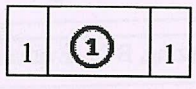
RAMRAO ADIK INSTITUTE OF TECHNOLOGY, NERUL

(D Y Patil Deemed to be University)

Program:B.Tech Computer Engineering
End Semester Examination: T.E.Semester VI
Course Code:CECDLO6033 **Course Name: Computer Vision**
Time: 2 hour
Max. Marks: 60

Instructions: 1. All three questions are compulsory

Que. No.	Question	Max. Marks	CO	BT
Q1	Solve any **Four**			
i)	Describe what is Perspective transform.	5	CO1	BT2
ii)	Explain concept of threshold based segmentation	5	CO2	BT2
iii)	Evaluate erosion on the given image A with structuring element B A=  B = 	5	CO3	BT5
iv)	Explain Line fitting	5	CO4	BT2
v)	Analyze the problems faced while detecting the object.	5	CO5	BT4
vi)	Explain Global features of object representation.	5	CO6	BT2

Que. No.	Question	Max. Marks	CO	BT
Q2 A	Solve any **Two**			
i)	How K means clustering is used for segmentation	5	CO2	BT3
ii)	Derive the equation to obtain the first order moments	5	CO4	BT3
iii)	Explain the distance relational approach	5	CO6	BT2
iv)	Consider a line AB with coordinates A(0, 0) and B(4, 5) in a 2D plane. Solve and obtain a matrix of transformation for scaling for the line AB in X direction	5	CO1	BT3

	by factor 3 and plot the same.			
Q 2 B	Solve any **One**			
i)	What are Chain codes? Illustrate 8-chain code with a suitable example.	10	**CO3**	**BT3**
ii)	Explain backtracking algorithm with suitable example	10	**CO5**	**BT2**

Que. No.	**Question**	**Max. Marks**	**CO**	**BT**
Q3	Solve any **Two**			
i)	Analyze and apply Hough transform to draw a line joining the given points : (1,4),(2,3),(3,1),(4,1),(5,0)	10	**CO4**	**BT4**
ii)	Explain Scale Invariant Feature transform	10	**CO3**	**BT2**
iii)	Analyze and explain Region growing technique with a suitable example	10	**CO2**	**BT4**

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Course Outcomes (CO) -Learner will be able to:

CO1: Describe the foundation of image formation and image analysis.
CO2: Explore various advance approaches in image segmentation.
CO3: Illustrate ways to describe and represent images.
CO4: Represent objects using different area features.
CO5: Apply recognition steps to identify objects
CO6: Perceive detailed mechanisms for image alignment and matching.

BT1- Remembering, BT2- Understanding, BT3- Applying, BT4- Analyzing, BT5- Evaluating, BT6- Creating