SET A

SRM Institute of Science and Technology
College of Engineering and Technology

DEPARTMENT OF ECE

SRM Nagar, Kattankulathur – 603203, Chengalpattu District, Tamilnadu

Academic Year: 2023 - 2024 (ODD)

Test: CLAT- 1 | **Date: 14-08-2023**
Course Code & Title: 18ECE340T – Machine Perception with Cognition | **Duration:** 50 Minutes
Year & Sem: IV/VII | **Max. Marks:** 25

Course Articulation Matrix:

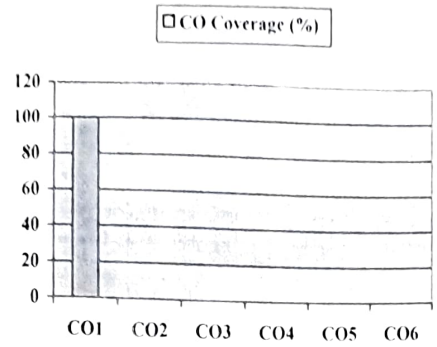
	18ECS301J – Applied Programming	PROGRAM OUTCOMES												PROGRAM STUDENT OUTCOMES		
CO	COURSE OUTCOMES	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
1	Understand the fundamentals of image Processing, camera and color models	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Analyze the binary shapes, region and boundary-based image modeling	3	-	-	2	-	-	-	-	-	-	-	-	-	-	-
3	Illustrate the various filter banks, shape and textures for image synthesis	-	-	-	2	-	-	-	-	-	-	-	3	-	-	-
4	Express the objects, frames based on template relations	3	-	2	-	-	-	-	-	-	-	-	-	-	-	-
5	Apply the concept of 2D and 3D face recognition	-	-	3	-	2	-	-	-	-	-	-	-	-	-	1
6	Implement the concept of image processing and machine vision in real time applications	3	2	-	-	-	-	-	-	-	-	-	-	2	-	-

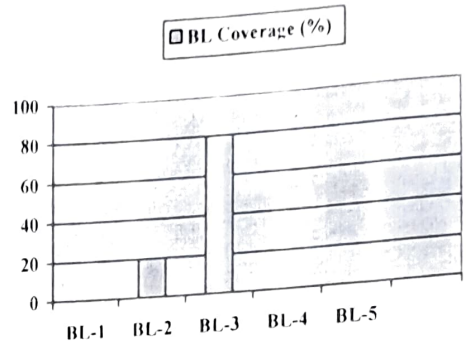
Part – A (5 x 1 = 5 Marks)
Answer all the Questions

Q. No	Question	Marks	BL	CO	PO
1	How does picture formation in the eye vary from image formation in a camera? a) Fixed focal length b) Varying distance between lens and imaging plane c) No difference d) Variable focal length	1	2	CO1	1
2	Which of the following image processing approaches is the fastest, most accurate, and flexible? (a) Photographic (b) Electronic (c) Digital (d) Optical	1	2	CO1	1
3	(C M Y K) = (0 0 0 0) represents _____ colour. (a) White (b) Black (c) Red (d) Green	1	2	CO1	1
4	_____ determines the quality of a digital image. a) The discrete gray levels b) The number of samples c) discrete gray levels & number of samples d) focal length of the camera	1	2	CO1	1
5	The input and output of image processing are? (a) signal and image (b) signal only (c) depends on input (d) image only	1	2	CO1	1
	Part – B (2 x 4 = 8 Marks) **Instructions: Answer ANY 2 Questions**				
6	Specify the different type of images.	4	3	CO1	1
7	Compute the colour conversion from RGB (0, 255 0) to CMYK model.	4	3	CO1	1

8	Write short notes on Texture based Shadow Detection and Model based Techniques.	4	3	CO1	1
	Part – C (1 x 12 = 12 Marks)				
9 (a)	Explain the sequential process involved in processing of an image with neat block diagram.	12	3	CO1	1
	OR				
(b)	Explain the photometric image formation and the factors involved while clicking on camera to take the picture with neat diagram.	12	3	CO1	1

Course Outcome (CO) and Bloom's level (BL) Coverage in Questions





Evaluation Sheet

Name of the Student : Kaidash.S
Register Number : RA2011004010132

Part- A (5 x 1= 5 Marks)					
Q. No	CO	PO	Max Marks	Marks Obtained	Total
1	CO1	PO1	1		
2	CO1	PO1	1		
3	CO1	PO1	1		
4	CO1	PO1	1		
5	CO1	PO1	1		

Part- B (2 x 4= 8 Marks)					
Q. No	CO	PO	Max Marks	Marks Obtained	Total
6	CO1	PO1	4		
7	CO1	PO1	4		
8	CO1	PO1	4		
Part-C (1 x 12= 12 Marks)					
9a)	CO1	PO1	12		
9b)	CO1	PO1	12		

	TOTAL (25 marks)_ =

Consolidated Marks:

CO	Maximum Marks	Marks Obtained
1	25	
Total	25	

PO	Maximum Marks	Marks Obtained
1	25	
Total	25	

Signature of Course Teacher