

Sub Code/Name	18CSE390T – Computer Vision	Set	EVEN
Year/Sem/Branch	III/ V/ B.Tech-CSE-AIML A,B,C	Date	17.10.22
Max. Marks	50	Duration	90 Mins.

PART A (10 X 1= 10)

ANSWER ALL THE FOLLOWING QUESTIONS

Q.No.	MCQ Questions	Marks	CO	BL	PI
1.	<b>For edge detection we observe</b> a) intensity transition b) shape transition c) color transition d) sign transition	1	2	1	1.6.1
2	<b>The direction of angle to the gradient is</b> a) Orthogonal b) Isolated c) Isomorphic d) Isotropic	1	2	1	1.6.1
3	<b>Edge detection in images is commonly accomplished by performing a spatial --- of the image field.</b> a) Smoothing Filter b) Integration c) Differentiation d) Min Filter	1	2	2	1.6.1
4	<b>Multi-dimensional hashing maps descriptors into _____ based on some function applied to each descriptor vector.</b> a) fixed size buckets b) variable sized buckets c) table d) Dbms	1	2	2	1.6.1
5	<b>Isolated edge points can also be grouped into _____</b> a) Pixel b) region c) Longer curves or contours, as well as straight line segments d) Contour	1	2	1	1.6.1
6	<b>Techniques like Livewire or Intelligent Scissors are used in</b> a. Model based segmentation b. Semi automatic segmentation c. Threshold segmentation d. Segmentation	1	3	1	1.6.1

7	<b>Example of Active Contour</b> a.Snakes, intelligent scissors, level set b. Suceesive Approximation c. Hough Transform d.Scissors	1	3	1	1.6.1
8	<b>An Approach which optimize the contour in real time as the user is drawing</b> a) Intelligent Scissors System b) Gaussian c) Similarity d) Edge	1	3	1	1.6.1
9	<b>In level set which define the curve</b> a. Contrast b. Quantization c. Sampling d. Zero crossing of a characteristic function	1	3	1	1.6.1
10	<b>Split and merge technique is</b> a. Image Restoration Technique b. an Image Processing Technique Used To Segment An Image c. Image Enhancement Technique d. Image Acquisition Technique	1	3	1	1.6.1

**PART B (4 X 4 = 16)**

**ANSWER ANY FOUR OUT OF SIX QUESTIONS**

Q. No.	Questions	Marks	CO	BL	PI
11	Discuss about Bias and Gain normalization	4	2	1	2.5.1
12	Explain briefly about Vanishing points	4	2	2	2.5.2
13	Write short notes on Edge Linking	4	2	2	2.5.4
14	Discuss in detail about Snakes	4	3	2	2.5.1
15	Difference between Divisive and Agglomerative algorithms in Cluster analysis.	4	3	2	2.6.4
16	Write short note on Pose Estimation.	4	3	2	2.6.2

**PART C (2 X 12 = 24)**

**ANSWER EITHER OF OR IN EACH UNIT**

Q. No.	Questions	Marks	CO	BL	PI
17	a) Explain in detail about Feature Detection techniques with relevant examples and diagrams.	12	2	3	2.6.4
	OR				
18	b) What are Feature Descriptors? Explain the following Feature Descriptors: ii) SIFT iii)GLOH.	12	2	2	2.7.1
	a) List the approaches used to locate Boundary Curves in Images. Explain Intelligent Scissors and Level Set in detail.	12	3	1	2.7.1
	OR				
	b) Illustrate the Expectation Maximization algorithm in K-means and Mixture of Gaussians..	12	3	3	2.7.1

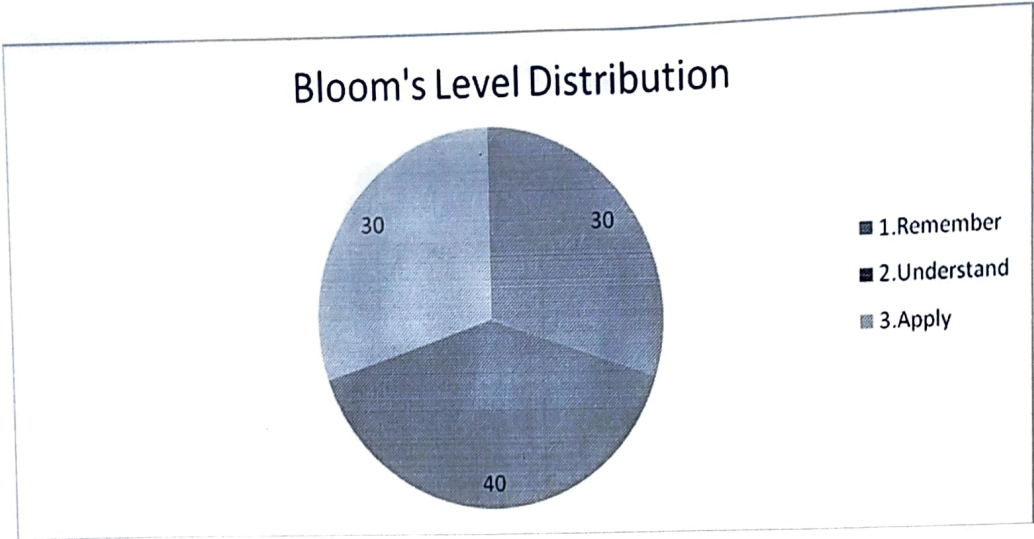
7.6.1 Outcome Alignment Matrix:

QUESTION NUMBER	CO distribution				
	CO1	CO2	CO3	CO4	CO5
1.		1			
2.		1			
3.		1			
4.		1			
5.		1			
6.			1		
7.			1		
8.			1		
9.			1		
10.			1		
11.		4			
12.		4			
13.		4			
14.			4		
15.			4		
16.			4		
17 a		12			
17 b		12			
18 a			12		
18b			12		
<b>Total</b>		<b>41</b>	<b>41</b>		
<b>%</b>		<b>50%</b>	<b>50%</b>		

Quality Matrix:

Question No.	BL Distribution		
	L1	L2	L3
1	1		
2	1		
3		1	
4		1	
5	1		
6	1		
7	1		
8	1		
9	1		
10	1		
11	4		
12		4	
13		4	
14		4	
15		4	
16		4	
17a			12
17b		12	
18a	12		
18b			12
<b>Total</b>	<b>24</b>	<b>34</b>	<b>24</b>
<b>%</b>	<b>30%</b>	<b>40%</b>	<b>30%</b>

**Bloom's level Distribution:**



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