RAMAPURAM SRM

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

RAMAPURAM CAMPUS

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR (2022-2023)

CONTINUOUS LEARNING ASSESMENT-II

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.	**For edge detection we observe** a) intensity transition b) shape transition c) color transition d) sign transition	1	2	1	1.6.1
2	**The direction of angle to the gradient is** a) Orthogonal b) Isolated c) Isomorphic d) Isotropic	1	2	1	1.6.1
3	**Edge detection in images is commonly accomplished by** performing a spatial --- ---of the image field. a) Smoothing Filter b) Integration c) Differentiation d) Min Filter	1	2	2	1.6.1
4	**Multi-dimensional hashing maps descriptors into _____based on some function applied to each descriptor vector.** a) fixed size buckets b) variable sized buckets c) table d) Dbms	1	2	2	1.6.1
5	**Isolated edge points can also be grouped into_____** a) Pixel b) region c) Longer curves or contours, as well as straight line segments d) Contour	1	2	1	1.6.1
6	**Techniques like Livewire or Intelligent Scissors are used in** a.Model based segmentation b.Semi automatic segmentation c.Threshold segmentation d.Segmentation	1	3	1	1.6.1
7	**Example of Active Contour** a.Snakes, intelligent scissors, level set b. Suceesive Approximation c. Hough Transform d.Scissors	1	3	1	1.6.1
8	**An Approach which optimize the contour in real time as the user is drawing** a) Intelligent Scissors System b) Gaussian c) Similarity d) Edge	1	3	1	1.6.1
9	**In level set which define the curve** a. Contrast b. Quantization c. Sampling d. Zero crossing of a characteristic function	1	3	1	1.6.1
10	**Split and merge technique is** 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				
	b) What are Feature Descriptors? Explain the following Feature Descriptors: ii) SIFT iii)GLOH.	12	2	2	2.7.1
18	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