GUJARAT TECHNOLOGICAL UNIVERSITY
ME – SEMESTER IV (NEW) EXAMINATION – SUMMER - 2017

Subject Code:2742302   **Date:03/05/2017**
Subject Name: Computer Vision
Time:02:30 pm to 05:00 pm   **Total Marks: 70**
Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Enlist Computer Vision applications and explain any two in detail.	**07**
	(b)	Discuss about Binocular Imaging System in detail.	**07**
Q.2	**(a)**	Discuss Orthographic & Perspective Projection in detail.	**07**
	(b)	Explain BRDF in detail.	**07**
		OR	
	(b)	Explain the process of constructing 3D model from images?	**07**
Q.3	**(a)**	Enlist Various Methods of Edge Detection? Explain any one in detail.	**07**
	(b)	Explain regularization theory in context with Motion Estimation.	**07**
		OR	
Q.3	**(a)**	What is Image Representations? Explain Continuous and Discrete in detail.	**07**
	(b)	Explain Stereo Vision in context with Motion Estimation.	**07**
Q.4	**(a)**	Explain deformable curves and surfaces in detail.	**07**
	(b)	Explain Shape correspondence and shape matching in context with object recognition.	**07**
		OR	
Q.4	**(a)**	Differentiate Contour based representation and Region based representation.	**07**
	(b)	Explain Principal Component Analysis.	**07**
Q.5	**(a)**	Explain Gaussian Mixture Model and Hidden Markov Model.	**07**
	(b)	Explain Chamfer matching & tracking in detail.	**07**
		OR	
Q.5	**(a)**	Describe expectation-maximization algorithm.	**07**
	(b)	Explain In-Vehicle vision system application.	**07**

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