GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER- II(Old course) • EXAMINATION (Remedial) - WINTER- 2015

Subject Code: 1724106 Subject Name: Image Matching and Registration Time: 2:30 pm to 5:00 pm Instructions: Date: 14/ Total Ma			/12/2015	
			rks: 70	
insti u	1. 2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.		
Q.1	(a)	What is image registration? Discuss the applications of image registration.	07	
	(b)	Explain the stereo vision system using block diagram.	07	
Q.2	(a) (b)		07 07	
		OR		
	(b)	With reference to image matching and registration discuss the terms: multi-sensor, multi-view, multi-temporal, multi-resolution.	07	
Q.3	(a)	List various similarity metrics for area based image registration. Why the similarity metric should be selected carefully in area based image registration?	07	
	(b)		07	
Q.3	(a)	Discuss useful properties of Fourier transform that can be used for image registration.	07	
	(b)	List and discuss various performance parameters for image registration process.	07	
Q.4	(a)	Discuss affine geometric transformation with necessary mathematical equations. If an image is rotated by 18 degree, then after translated in x-direction by 15 pixels and translated in y direction by 25 pixels. For a pixel with coordinates (30, 40) what will be the new coordinates?	07	
	(b)		07	
Q.4	(a) (b)		07 07	
Q.5	(a) (b)		07 07	
Q.5	(a)		07	
	(b)		07	
