Seat No.:	Enrolment No.

Subject Code:2722610

GUJARAT TECHNOLOGICAL UNIVERSITY

ME – SEMESTER II • EXAMINATION – SUMMER - 2017

Date:29/05/2017

Subject Name: Advance Image Processing Time:02:30 PM to 05:00 PM Total Marks Instructions:		70	
11131	1. 2. 3.	Attempt all questions.	
Q.1	(a)	What are group operators for Image Processing? Give their Names and explain template convolution in detail.	07
	(b)	Explain Grey level Erosion and Dilation operations with examples.	07
Q.2	(a)	Give steps for Canny edge detection Operation. Explain Non-maximum suppression and hysteresis thresholding with figure.	07
	(b)	Explain difference between Histogram equalization and Histogram normalization techniques with fig. OR	07
	(b)	Explain Phase Congruency its advantages, disadvantages and uses.	07
Q.3	(a) (b)	Explain background estimation by mean and median filtering. Describe 2 nd order edge detection operators. OR	07 07
Q.3	(a) (b)	Write logical code for template matching. Write down logical steps for greedy algorithm.	07 07
Q.4	(a) (b)	Describe Huffman coding with an example. Explain water marking techniques for Digital images. OR	07 07
Q.4	(a) (b)	Brief about techniques for motion detection. Explain any one shape extraction technique in detail.	07 07
Q.5	(a) (b)	Explain 3D Image visualization and 3D image acquisition. Explain Optical sectioning and sequential removal process with sketch.	07 07
		OR	
Q.5	(a) (b)	Discuss about boundary descriptors. Explain Generalized Hough transform with example.	07 07
