Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA - SEMESTER - V EXAMINATION - WINTER 2015

	•	Code: 2650011 Date:10/12/20	15
Tir	•	t Name: Image Processing (IP) 0.30 am to 01.00 pm Total Marks:	70
	2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a)	Define Image Processing and explain the components of anImage Processing System.	07
	(b)	Explain Coding Redundancy and Image Compression Model in detail.	07
Q.2	(a) (b)	Explain fundamental steps involved in Digital Image Processing. Explain Smoothing Spatial Filters in detail.	07 07
		OR	
	(b)	Explain the concept of Image Enhancementusing arithmetic/logic operations.	07
Q.3	(a) (b)	What is Morphology? Explain Erosion and Dilation in detail. Explain Basic Gray Level Transformations.	07 07
		OR	
Q.3	(a) (b)	Explain LZW Coding in detail. What is Error-Free Compression? Explain Huffman Coding in detail.	07 07
Q.4	(a) (b)	Explain Convex Hull in detail. Explain Local Segmentation in detail.	07 07
		OR	
Q.4	(a) (b)	Explain Global Segmentation in detail. Explain Correlation Matching and Optimal Statistical Classifier in detail.	07 07
Q.5	(a) (b)	Explain Noise Model and Inverse filter in detail. Explain the concept of Boundary Extraction and Region Fillingin detail.	07 07
		OR	
Q.5	(a) (b)	What is Image Segmentation? Explain Point, Line and Edge detection. Explain Watershed Segmentation and Region Based Segmentation in detail.	07 07
