Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME – SEMESTER IV (NEW) – • EXAMINATION – WINTER 2016

Subject Code: 2740501 **Date: 26/10/2016**

Subject Name: VIDEO PROCESSING

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)**	Explain Three Step Search Method for Block Matching Algorithm.	**07**
	(b)	Explain Temporally Averaging Filters for Spatiotemporal Noise Filtering process.	**07**
Q.2	**(a)**	Explain Kinescope Moire` Removal technique.	**07**
	(b)	Explain Scene Change Detection algorithm.	**07**
		OR	
	(b)	Explain Scratch Removal techniques.	**07**
Q.3	**(a)**	Explain K-Means method for Multiple Motion Segmentation.	**07**
	(b)	Explain Contour Based Object Tracking.	**07**
		OR	
Q.3	**(a)**	Explain template based object tracking.	**07**
	(b)	Draw and Explain Generalized Transform based Video Compression System.	**07**
Q.4	**(a)**	Explain H.261 Video encoder.	**07**
	(b)	Explain Multiresolution filters to remove Spatiotemporal Noise.	**07**
		OR	
Q.4	**(a)**	Compare MPEG1 Video Coding and H.261 Standard.	**07**
	(b)	Explain Phase Correlation method for Motion Estimation.	**07**
Q.5	**(a)**	Explain H.261 data structure Hierarchy.	**07**
	(b)	Explain spatial motion model for motion estimation.	**07**
		OR	
Q.5	**(a)**	Explain pixel domain criteria for estimation.	**07**
	(b)	Explain Region Based ML Segmentation : fusion of Color and Motion.	**07**

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