Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VIII • EXAMINATION – SUMMER 2014

Subject Code: 181602 **Date: 31-05-2014**

Subject Name: Data Compression

Time: 10:30 am TO 01:00 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)**	What is compression? Compare Lossy and Lossless compression.	**07**
	(b)	Differentiate modeling and coding.	**07**
Q.2	**(a)**	Explain LZ77 (sliding window) method with example.	**07**
	(b)	Write a short note: PNG	**07**
		OR	
	(b)	Explain LZ78 method with example.	**07**
Q.3	**(a)**	Describe sahnnon-fano algorithm with illustrative example.	**07**
	(b)	Explain the huffman algorithm with example.	**07**
		OR	
Q.3	**(a)**	What is the height of huffman tree? Explain it.	**07**
	(b)	Write a short note: facsimile compression	**07**
Q.4	**(a)**	What is JPEG? Explain it.	**07**
	(b)	Explain finite automata method of image compression.	**07**
		OR	
Q.4	**(a)**	What is WSQ fingerprint compression? Explain it.	**07**
	(b)	Explain fourier image compression in detail.	**07**
Q.5	**(a)**	What is DCT? Explain it.	**07**
	(b)	Write a short note: speech compression	**07**
		OR	
Q.5	**(a)**	Explain ADPCM audio compression in detail.	**07**
	(b)	Write a short note: human auditory system	**07**

****