Seat No.:	Enrolment No

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII EXAMINATION – WINTER 2015

Subject Code:181602			Date:04/12/2015	
Ti	me: 2 structio 1. 2.	Name: Data Compression 2:30pm to 5:00pm Total Marks: Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	70	
Q.1	(a)(b)	Describe different parameters used to evaluate the performance of compression algorithms. What is the need of data compression? Differentiate between lossy compression and lossless compression.	07 07	
Q.2	(a) (b)	Explain Adaptive Huffman compression technique in detail and compare it with Huffman technique. Describe the procedure for building the Huffman tree with example. OR	07	
	(b)	Explain Shannon-Fano Algorithm with example.	07	
Q.3	(a) (b)	Describe Arithmetic Coding with example and compare it with Huffman coding. Discuss BITIO.C	07	
	(D)	OR	U	
Q.3	(a) (b)	Discuss MAIN-C.C & MAIN-E.C Define Data Compression. Explain modeling, coding and entropy with example.	07 07	
Q.4	(a)(b)	Differentiate static and adaptive dictionary based compression technique with example. Describe LZSS compression in detail. OR	07	
Q.4	(a) (b)	Explain LZ77 algorithm. Also discuss problems with LZ77. Explain Differential Modulation and Adaptive coding.	07 07	
Q.5		(i) Discuss Inverse DCT.(ii) List applications of Data Compression.	07	
	(b)	Explain Discrete Cosine Transform. OR	07	
Q.5	(a) (b)	Describe JPEG. Explain Speech Compression with appropriate diagrams.	07 07	
