Sardar Vallabhbhai Patel Institute of Technology SVIT- VASAD

INFORMATION TECHNOLOGY (16) SUBJECT: - DCDR

SUBJECT CODE: 2161603 CLASS: - B.E. 6thSEMESTER

MID Semester Exam Syllabus

Chapter 1 Compression Techniques :Lossless Compression , Lossy Compression ,Measures of Performance
Chapter 2 Mathematical Preliminaries for Lossless Compression Models : Physical Models , Probability Models , Markov Models ,Composite Source Model Coding , Uniquely Decodable Codes ,Prefix Codes Algorithmic Information Theory Minimum Description Length Principle
Chapter 3 Huffman Coding Algorithm Minimum Variance Huffman Codes Adaptive Huffman Coding : Update Procedure , Encoding Procedure , Decoding Procedure Golomb Codes , Rice Codes , Tunstall Codes Applications of Huffman Coding :Lossless Image Compression , Text Compression , Audio Compression
Chapter 4 Arithmetic Coding : Introduction , Coding a Sequence , Generating a Tag , Deciphering the Tag , Generating a Binary Code Algorithm Implementation Integer Implementation Comparison of Huffman and Arithmetic Coding
Chapter 5 Dictionary Techniques : Static Dictionary , Digram Coding , Adaptive Dictionary , The LZ77 Approach , The LZ78 Approach , LZW Approach : A variation of LZ78 Applications of dictionary based technique: File Compression—UNIX compress , Image Compression—The Graphics Interchange Format (GIF) , Image Compression—Portable Network Graphics (PNG) , Compression over Modems—V.42 bis