SNO	UNIT	Lecture	Contents
1	Introduction of distributed system & architectures	lecture1	Definition & Goals of distributed system
		lecture2	Types of distributed system
		lecture3	Architectural styles & system architectures
		lecture4	Architectures Vs Middle ware
		lecture5	Self management in distributed system
2	Processes & Communication	lecture6	Threads
		lecture7	Virtualization
		lecture8	Clients & Servers
		lecture9	Code Migration
		lecture10	Communication fundamentals
		lecture11	Remote procedure call
		lecture12	Message & stream oriented communication
		lecture13	Multicast communication
3	Naming & Synchronization	Lecture14	Flat naming & Structured naming
		lecture15	Attribute based naming
		lecture16	Clock synchronization & logical clocks

		lecture17	Mutual exclusion
		lecture18	Global positioning of nodes & election algorithms
4	Consistency & Replication and fault tolerance	lecture19	Data centric consistency models
		lecture20	Client centric consistency models
		lecture21	Replica management & consistency protocols
		lecture22	Introduction of fault tolerance
		lecture23	Process Resilience
		lecture24	Reliable client-server & Reliable group communication
		lecture25	Distributed commit & Recovery
5	Security & Distributed object based systems	lecture26	Introduction to security & secure channels
		lecture29	Access control & security management
		lecture30	Distributed objects & Object Servers
		lecture31	Binding,Remote Method Invocations,
		lecture32	Object based Messaging, CORBA

6	Distributed File systems & Distributed web based system & Distributed coordination based system	Lecture33	Distributed file systems (SUN, DODA),Cluster-Based Distributed File Systems & Symmetric Architectures
		lecturel34	RPCs , Naming & Security in NFS
		lecture 35	Traditional Web-Based Systems, Apache Web Server
		lecture 36	Hypertext Transfer Protocol, Web Proxy Caching
		lecture 37	coordination- based systems ,Coordination models, Architecture,
		lecture 38	Multimedia systems
		Lecture 39	Parallel Programming Languages and Algorithms

7CS6.3 DATA COMPRESSION TECHNIQUES **DINESH SONI**

SNO	UNIT	Lecture	Contents
1	Introduction of compression techniques	lecture1	Compression techniques
		lecture2	Modeling & coding
		lecture3	Average information & data models
		lecture4	Uniquely decodable codes, prefix codes
		lecture5	Kraft-Mc Millan inequality
		lecture6	Huffman coding
2	Coding techniques	lecture7	Arithmetic coding
		lecture8	Dictionary Techniques: LZ77
		lecture9	LZ78
		lecture10	LZW
		lecture11	Predictive coding: Burrows-Wheeler Transform
		lecture12	move-to-front coding
		lecture13	Facsimile Encoding: Run length
		lecture14	T.4 coding
		lecture15	T.6 coding

3	Lossy coding & Quantization	lecture16	Distortion criteria, conditional entropy
		lecture17	average mutual information, differential entropy
		lecture18	rate distortion theory, probability and linear system models.
		lecture19	quantization problem, uniform quantizer
		lecture20	Forward adaptive quantization
		lecture21	non-uniform quantization-Formal adopting quantization, companded Quantization
		lecture23	Vector quantization, Linde-Ruzo-Grey algorithm,
		lecture24	Lattice vector quantization
4	Differential encoding	lecture25	Introduction of Differential encoding & basic algorithm
		lecture26	Adaptive DPCM
		lecture27	Delta modulation
		lecture28	speech and image coding using delta modulation
5	Sub band coding	lecture29	Introduction of Sub band coding
		lecture30	Filters
		lecture31	Basic Algorithm
		lecture32	Design of filter banks
		lecture33	G.722

		lecture34	MPEG
6	Wavelet based compression	lecture35	Introduction of Wavelet based compression
		lecture36	wavelets multi-resolution analysis
		lecture37	wavelets multi-resolution analysis
		lecture38	scaling function implementation using filters.
		lecture39	scaling function implementation using filters.

SNO	UNIT	Lecture	Contents
1	Introduction	lecture1	Definition & characteristics of algorithms
		lecture2	complexity of program
		lecture3	Asymptotic notation
		lecture4	time and space complexity
		lecture5	Array as storage element
		lecture6	Row major & column major form of arrays
		lecture7	computation of address of elements of n dimensional array
2	LINEAR DATA STRUCTURES	lecture8	Polynomial representation
		lecture9	Sparse matrices
		lecture10	Stack
		lecture11	Queue
		lecture12	Dequeue
		lecture13	Circular queue
		lecture14	Evaluation of Expression using stack
		lecture15	conversion of expression
		lecture16	Recursion

3	LINKED LISTS	lecture17	Types of linked list
		lecture18	Insertion in linked list
		lecture19	Deletion in linked list
		lecture20	Comparison of arrays and linked lists
		lecture21	Linked implementation of stack,queue and dequeue
		lecture22	insertion, deletion and traversal in stack,queue and dequeue
		lecture23	Polynomial representation using linked lists
		lecture24	Head Node in linked lists
		lecture25	Sequential and binary search
4	TREES	lecture26	Introduction of non-linear structures & tree
		lecture27	binary tree Insertion ,deletion, traversal
		lecture28	constructing binary tree from traversal
		lecture29	Threaded binary Tree
		lecture30	AVL tree
		lecture31	insertion into and deletion from AVL tree
		lecture32	Application of trees

5	GRAPHS & SORTING	lecture33	Relation between tree & graph
		lecture34	adjacency matrix and list
		lecture35	Depth first and breadth first traversal
		lecture36	spanning tree
		lecture37	Single source single destination shortest path algorithms
		lecture38	Insertion, quick, heap sort algorithms
		lecture39	topological and bubble sorting algorithms
		lecture40	Comparison of sorting algorithms