

St. Ann's College of Engineering & Technology: Chirala

Department of COMPUTER SCIENCE & ENGINEERING

LECTURE SCHEDULE

SUBJECT: Advanced Data Structures

ACADEMIC YEAR: 2017-18

No. of Lectures per week: 4 + 1*(T)

YEAR & SEM/SECTION: II-II CSE-B

S. NO	DATE	UNIT	TOPICS
1	21-Nov-17	I	Revision on Data Structures
2	22-Nov-17		Introduction to Advanced Data Structures
3	23-Nov-17		Overview of the Subject
4	24-Nov-17		UNIT-I: SORTING
5	25-Nov-17		External Sorting- Introduction
6	28-Nov-17		K-way Merging
7	29-Nov-17		Buffer Handling for parallel Operation-
8	30-Nov-17		Run Generation
9	2-Dec-17		Tutorial
10	5-Dec-17		Optimal Merging of Runs.
11	6-Dec-17		Unit I Exam
12	7-Dec-17	II	OT-1 UNIT-II: HASHING Introduction
13	8-Dec-17		Static Hashing
14	12-Dec-17		Hash Table
15	13-Dec-17		Hash Functions
16	14-Dec-17		Secure Hash Function
17	15-Dec-17		Overflow Handling- Theoretical Evaluation of Overflow Techniques
18	16-Dec-17		Tutorial
19	19-Dec-17		Dynamic Hashing- Motivation for Dynamic Hashing
20	20-Dec-17		Dynamic Hashing Using Directories
21	21-Dec-17		Directory less Dynamic Hashing
22	22-Dec-17		Unit II Exam
23	23-Dec-17		Tutorial
24	26-Dec-17		OT-2 UNIT-III: Priority Queues -Heap Operations, Other Operations
25	27-Dec-17		Applications of Priority Queues

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26	28-Dec-17		The Selection Problem
27	29-Dec-17		Event Simulation Problem
28	30-Dec-17		Tutorial
29	2-Jan-18	III	Binomial Queues
30	3-Jan-18		Binomial Queue structure
31	4-Jan-18		Binomial Queue Operation
32	5-Jan-18		Implementation of Binomial Queues
33	6-Jan-18		Tutorial
34	9-Jan-18		UNIT-IV: EFFICIENT BINARY SEARCH TREES Optimal Binary Search Trees
35	10-Jan-18		AVL Trees
36	11-Jan-18		AVL Trees
37	12-Jan-18		Red-Black Trees, Definition- Representation of a Red- Black Tree
38	17-Jan-18		
39	18-Jan-18		Revision I Mid
40	19-Jan-18		Revision I Mid
41	20-Jan-18		Revision I Mid
42	23-Jan-18		Revision I Mid
43	24-Jan-18	IV	Searching a Red-Black Tree-
44	25-Jan-18		Inserting into a Red Black Tree-
45	27-Jan-18		Tutorial
46	30-Jan-18		Deletion from a Red-Black Tree-
47	31-Jan-18		Joining Red-Black Trees
48	1-Feb-18		Splitting a Red-Black tree.
49	2-Feb-18		Unit-IV Exam
50	3-Feb-18		
51	6-Feb-18		UNIT-V: MULTIWAY SEARCH TREES M-Way Search Trees, Definition and Properties-
52	7-Feb-18		Searching an M-Way Search Tree
53	8-Feb-18		B-Trees, Definition and Properties-
54	9-Feb-18		Number of Elements in a B-tree-
55	10-Feb-18		Tutorial

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56	14-Feb-18	V	Insertion into B-Tree-
57	15-Feb-18		Deletion from a B-Tree-
58	16-Feb-18		B+-Tree Definition-
59	17-Feb-18		Tutorial
60	20-Feb-18		Searching a B+-Tree- Insertion into B+-tree-
61	21-Feb-18		Deletion from a B+-Tree.
62	22-Feb-18		VI
63	23-Feb-18	Binary tries and Patricia, Binary Tries,	
64	24-Feb-18	Compressed Binary Tries- Patricia	
65	27-Feb-18	, Multiway Tries- Definitions- Searching a Trie- Sampling Strategies- Insertion into a Trie-	
66	28-Feb-18	Deletion from a Trie- Keys with Different Length- Height of a Trie-	
67	1-Mar-18	Space Required and Alternative Node Structure- Prefix Search and Applications-	
68	3-Mar-18	Compressed Tries- Compressed Tries With Skip Fields-	
69	6-Mar-18	Compressed Tries With Labeled Edges- Space Required by a Compressed Tries,	
70	7-Mar-18	Tries and Internet Packet Forwarding ,IP Routing- 1-Bit Tries- Fixed-Stride Tries-Variable-Stride Tries.	
71	8-Mar-18		
72	9-Mar-18		Revision UNIT II IMP Questions
73	13-Mar-18		Revision UNIT III IMP Questions
74	14-Mar-18		Revision UNIT VI IMP Questions
75	15-Mar-18		Revision UNIT V IMP Questions
76	16-Mar-18		Revision UNIT IV IMP Questions
77	17-Mar-18		Revision -Tutorial
78	20-Mar-18		Revision II Mid
79	21-Mar-18		Revision II Mid
80	22-Mar-18		Revision II Mid
81	23-Mar-18		Revision II Mid
82	24-Mar-18		Revision II Mid

FACULTY MEMBER

HEAD OF THE DEPARTMENT