

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(AUTONOMOUS)

Accredited by NAAC with 'A' Grade & NBA (Under Tier - I), An ISO 21001:2018,14001:2015,50001:2018 Certified Institution Approved by AICTE, New Delhi and Affiliated to JNTUK, Kakinada L.B. REDDY NAGAR, MYLAVARAM, NTR DIST., A.P.-521 230.

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ASSIGNMENT-1

Q.No		Blooms Level	Course Outcome	Unit
1	Show that the following equalities are correct. • $33n^3+44n^2+50n=\Omega(\log n)$ • $5n^3+4n^2+5\log n-1=O(n^2\log n)$ • $n^{1.001}+n\log n=\theta(n^{1.001})$	L3	CO1	I
2	Use the step count method to estimate the time complexity of the following algorithm in which the run starts from the function CallSum (array1,array2,n). Then find the time complexity when n = 3, 6 and 10. CallSum (array1,array2,n) { for (i=0; i <n; (array,n)="" (array1,i+1);="" (i="0;" +="" array2[i]="sum" array[i];="" for="" i++)="" i<n;="" return="" sum="" td="" total_sum="total_sum" total_sum;="" {="" }="" }<=""><td>L4</td><td>CO1</td><td>I</td></n;>	L4	CO1	I
3	Start with an empty AVL Tree and perform the following sequence of insertions: December, January, April, March, July, August, October, February, November, May, June	L3	C01	I
4	Consider an empty B-Tree with order 5 and insert the elements in the following sequence: 6 , 13 , 16 , 11 , 7 , 17 , 14 , 8 , 5 , 19 , 15 , 1 , 2 , 4 , 18 , 13 , 9 , 20 , 10 , 12 , 21 .	L3	CO1	I
5	Design and analyze the time and space complexities of Towers of Hanoi with suitable example.	L4	CO3	II
6	Apply Quick Sort algorithm for the list of elements: 54, 26, 93, 17, 77, 31, 44, 55, 20	L3	CO3	II
7	Let G be a connected undirected graph. write an algorithm to find the minimum number of edges have to be added to G so that G becomes biconnected. Your algorithm should output such a set of edges. Analyze the time complexity of your algorithm?	L4	CO3	II

Title	Course Instructor	Course Coordinator	Module	Head of the
Title			Coordinator	Department

	Dr. M. Sitha Ram	Dr. M. Sitha Ram	Dr. Y.V.B REDDY	Dr. D. Veeraiah
Name of the	Dr. S. Nagarjuna Reddy			
Faculty	Mr. N.V.Naik			
	Mrs. G.V. Rajya Laxmi			
Signature				