LessonPlan

Name of Faculty : **Ms Bharti Sethi, Assistant Professor, CSE**

Semester : **CSE-4th SEM**

Subject : **Analysis & Design of Algorithms (PC/CSE/44-T)**

Lesson Plan Duration : **15 weeks (from feb-2025 to June/ july-2025)**

Work Load (Lecture/Practical) per week (in hours) : **(3-L)**

Week	Theory		Topic Covered, Date and Remarks		
	Lecture-Day	Topic(Including Assignment/Test)	Date	HOD	Director-Principal
1st	1	Algorithms			
	2	Analyzing algorithms			
	3	Asymptotic notations			
2nd	4	Insertion sort			
	5	Divide and Conquer General method			
	6	Binary search			
3rd	7	Merge sort			
	8	Quick sort			
	9	Stassen' s matrix multiplication algorithms			
	10	Sorting and Data Structure: Heap sort			
	11	Hash Tables			
	12	Red Black Trees			
		1stMinorTest			
5th	13	Analysis of Algorithms			
	14	Greedy Method: General method			
	15	Minimum spanning trees			
6th	16	Single source paths and analysis of these problems.			
	17	Dynamic Programming :General method,			
	18	Matrix chain multiplication			
7th		**2nd Minor Test**			
8th	19	Longest common subsequence			
	20	Optimal binary search trees			
	21	Analysis of Algorithms			
9th	22	Complexity of algorithms			
	23	Back Tracking :General method			
	24	8queen'sproblem			
10th	25	Graph colouring,			
	26	Hamiltonian cycles			
	27	Analysis of these problems			
11th	28	Branch and Bound :Method			
	29	O/I knapsack			
	30	Traveling salesperson problem			
12th	31	Analysis of Algorithms			
	32	NP Completeness			
	33	Polynomial time			
	34	NP Completeness and Reducibility			
	35	NP Completeness and Reducibility			
	36	Query and Problems Redresses			
14th		**3rd Minor Test**			
15th	37	Analysis of Algorithms			
	38	NP-complete problems			
	39	NP hard problems			

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