Lesson Plan

Name of Faculty : **Miss Bharti Sethi, Assistant Professor in CSE**

Semester : **CSE-4th SEM**

Subject : **Analysis & Design of Algorithms (ADA) (CSE-208-L)**

Lesson Plan Duration : **15 weeks (from feb-2024 to June/ july-2024)**

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	Algorithms as a Technology			
	3	Analyzing algorithms			
	4	Asymptotic notations			
2nd	5	Insertion sort			
	6	Query and Problems Redresses			
	7	Divide and Conquer General method			
	8	Binary search			
3rd	9	Merge sort			
	10	Quick sort			
	11	Query and Problems Redresses			
	12	Stassen's matrix multiplication algorithms			
4th	13	Analysis of algorithms for these problems			
	14	Sorting and Data Structure: Heapsort			
	15	Hash Tables			
	16	Red Black Trees			
5th	17	Analysis of Algorithms			
	18	Greedy Method: General method			
	19	Knapsack problem			
	20	Minimum spanning trees			
6th	21	Single source paths and analysis of these problems.			
	22	Query and Problems Redresses			
	23	Dynamic Programming: General method,			
	24	matrix chain multiplication			
7th		**1st Minor Test**			
8th	25	Longest common subsequence			
	26	Optimal binary search trees			
	27	Analysis of Algorithms			
	28	Query and Problems Redresses			
9th	29	complexity of algorithms			
	30	Back Tracking: General method			
	31	8 queen's problem			
	32	Query and Problems Redresses			
10th	33	Graph colouring,			
	34	Hamiltonian cycles			
	35	Analysis of these problems			
	36	Query and Problems Redresses			
11th	37	Branch and Bound: Method			
	38	O/I knapsack			
	39	Traveling salesperson problem			
	40	Query and Problems Redresses			
12th	41	Analysis of Algorithms			
	42	NP Completeness			
	43	Polynomial time			
	44	Query and Problems Redresses			
13th	45	Analysis of Algorithms			
	46	NP Completeness and Reducibility			
	47	NP Completeness and Reducibility			
	48	Query and Problems Redresses			
14th		**2nd Minor Test**			
15th	49	Analysis of Algorithms			
	50	NP-complete problems			

Lesson Plan