Lesson Planning

Name of the Institute : CRSSIET SILANI-KESHO, JHAJJAR
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Department : CIVIL ENGG
Subject &Code : **STRUCTURAL ANALYSIS & PCC-CE-206-G**
Branch/Semester : CE 4th Semester

Chapter Covered	Lect no.	Topic
Section-A	1	**MODULE 1: Deflection of Statically determinate structures**
	2	Deflection of determinate beams by Double Integration Method
	3	Conjugate Beam Method and Moment Area Methods,
	4	Principle of Virtual work (Unit load method) and Castigliano's theorem.
	5	**MODULE 2: Deflection of Statically determinate Frame & Truss**
	6	Deflection of determinate pin jointed trusses and rigid jointed frames by principle of virtual work
	7	Strain Energy and Castiglino's theorem
	8	Williot Mohr diagram method and Maxwell's laws of reciprocal theorem
Section-B	9	**MODULE 3: Travelling Loads**
	10	Maximum Shear Force and Bending Moment diagrams for simply supported beams carrying moving loads
	11	A Single Concentrated Load, Uniformly Distributed Load Two Concentrated Loads, fixed distance apart Series of Concentrated Loads
	12	Enveloping parabola, equivalent UDL for BM and SF in each of the above cases.
	13	**MODULE 4: Influence Line**
	14	Influence lines for reactions, BM & SF for simply supported beam and Panelled Girders.
	15	Influence lines for forces in trusses with top horizontal and curved both
	16	Reversal of stresses, Use of influence lines for calculating design forces due to dead

		load and moving live loads
	17	Influence lines using Muller Breslau principle.
Section-C	18	**MODULE 5: Arches**
	19	Determination of horizontal thrust
	20	, shear force and bending moment diagram for: 1. Two Hinged Arches **2**. Three Hinged Arches **3**. Fixed Arches
	21	**MODULE 6: Column Analogy Method & Cable and Suspension Bridge**
	22	Elastic centre, properties of analogous column,
	23	application to beam & frames
	24	Introduction of Cable and suspension Bridge uniformly loaded cables
	25	Temperature stresses, and three hinged stiffening Girder and two hinged stiffening girder
Section-D	26	**MODULE 7: Indeterminate Structures & Deflection methods**
	27	Introduction to Indeterminate Structures Determination of kinematic and static indeterminacy of beams, frames and trusses,
	28	Slope Deflection and Moment Distribution Methods- Analysis of continuous beams & portal frames
	29	, Portal frames with inclined members.
	30	**MODULE 8: Kani's Method**
	31	Analysis of continuous beam and simple frames
	32	Analysis of frames with different column lengths
	33	end condition of the bottom storey
	34	Numericals
	35	Numericals
	36	Numericals