



**Lesson Plan & Work-done Diary for AY: 2024-25, Even Semester**

Course with Code: Analysis of Structure -21CV44				Faculty: Manu Vijay			Semester: 4th	
Class No.	Date planned (DD/MM)	Topics to be covered	TLP Planned	Class No.	Date of Conduction (DD/MM)	Topics Covered	TLP Executed	Remarks if any deviation
1		Introduction to Syllabus	PPT					
<b>MODULE-1</b>								
2		Three-hinged circular and parabolic arches with supports at the same and different levels	PPT					
3		Three-hinged circular and parabolic arches with supports at the same and different levels	Chalk and board					
4		Problems on above	PPT					
5		Problems on above	Chalk and board					
6		Problems on above	Chalk and board					
7		Analysis of cables under point loads and UDL; Length of cables with supports at the same and different levels; Stiffening trusses for suspension cables	Chalk and board					
8		Problems on above	Chalk and board					
9		Problems on above	Chalk and board					
10		Problems on above	Chalk and board					



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<b>MODULE-2</b>								
11		Moment area method – Derivation, Mohr's theorems, Sign convention; Application of moment	Chalk and board					
12		area method to determinate prismatic beams, beams of varying cross section	Chalk and board					
13		Problems on above	Chalk and board					
14		Problems on above	Chalk and board					
15		Problems on above	Chalk and board					
16		Use of moment diagram by parts; Conjugate beam method – Real beam and conjugate beam, conjugate beam	Chalk and board					
17		Application of conjugate beam method to determinate beams of varying cross sections.	Chalk and board					
18		Problems on above	Chalk and board					
19		Problems on above	Chalk and board					
20		Problems on above	Chalk and board					



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<b>MODULE-3</b>								
21		Introduction, sign convention, development of slope deflection equation; Analysis of continuous beams including	Chalk and board					
22		Problems on Continuous beam	Chalk and board					
23		Problems on Continuous beam	Chalk and board					
24		Problems on Continuous beam	Chalk and board					
25		Problems on Continuous beam	Chalk and board					
26		Problems on orthogonal Rigid Frame	Chalk and board					
27		Problem's on Frames	Chalk and board					
28		Problem's on Frames	Chalk and board					
29		Problem's on Frames	Chalk and board					



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<b>MODULE-4</b>								
30		Definition of stiffness and flexibility methods, comparison to classical methods.	PPT					
31		Stiffness Method: Stiffness matrix, Analysis of continuous beams and plane trusses using system approach;	Chalk and board					
32		Problems on above	Chalk and board					
33		Problems on above	Chalk and board					
34		Problems on above	Chalk and board					
35		Problems on above	Chalk and board					
36		of simple orthogonal plane frames using system approach with kinematic indeterminacy up to 3.	Chalk and board					
37		Problems on above	Chalk and board					
38		Problems on above	Chalk and board					
39		Problems on above	Chalk and board					



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<b>MODULE-5</b>								
40		Principle of virtual displacements; Principle of virtual forces,	Chalk and board					
41		Strain energy and complementary energy;	Chalk and board					
42		Strain energy due to axial force, bending shear and torsion; Deflection of determinate beams and trusses using total strain energy	Chalk and board					
43		Deflection at the point of application of single point load;	Chalk and board					
44		application of Castiglioni's theorems to calculate deflection of trusses	Chalk and board					
45		frames; Special application – Dummy unit load method.	Chalk and board					
46		Problems on above	Chalk and board					
47		Problems on above	Chalk and board					
48		Problems on above	Chalk and board					
49		Problems on above	Chalk and board					
50		Problems on above	Chalk and board					
51		Problems on above	Chalk and board					

	Activity	Planned	Actual	Remarks
1	Theory Classes	43		
2	Assignments/ Quizzes/ Self-study	2/10		
3	Tutorials/ Extra classes	-		
4	Internal Assessments	3		
5	ICT based Teaching (% of usage in Curriculum)	10%		
<b>Planning</b>			<b>Execution</b>	
Faculty Signature:			Faculty Signature:	
HoD Signature:			HoD Signature:	