

LESSON PLAN					
Academic Session :- 2025-2026					
Discipline: Civil.Engineering			Name of teaching faculty:JYOTIRMAYEE SAMAL		
Subject: Theory Of Structures Th. 2			Semester from Date:22-12-2025 to 18-04-2026		
Semester: 6th			No. of weeks: 14		3P/week
o. of Days/ week class allotted: 04 period per week(Monday,TuesdayWednesday 1 P each)					Total period: 60
MO NT H	Week	DATE	DAYS/PE RIOD	Syllabus to be covered	NO. OF PERIO DS AVAIL ABLE
				CHAPTER 1:Direct and Bending stresses in vertical members (8
DEC	4th	22-12-2025	Monday	Introduction to axial and eccentric loads, eccentricityabout one principal axis only, nature of stresses, Maximum and minimum stresses, resultant stresses and distribution diagram.	1
		23-12-2025	Tuesday	Numericals	1
		24-12-2025	Wednesday	Numericals	1
	5th	29-12-2025	Monday	Condition for no tension or zero stress at extreme fiber,Limit of eccentricity,core of section for rectangular and circular cross sections, Middle third rule.	1
		30-12-2025	Tuesday	Numericals	1
		31-12-2026	Wednesday	Chimneys of circular cross section subjected to wind pressure, Maximum and minimum stresses, resultant stresses and distribution diagram at base.	1
JAN	2nd	05-01-2026	Mon	Numericals	1
		06-01-2026	Tuesday	Analysis of dams subjected to horizontal water pressure, conditions of stability, Maximum and minimum stresses, resultant stresses and distribution diagram at base	1
				Slope and Deflection	8
		07-01-2026	Wednesday	Concept of slope and deflection, stiffness of beams,Relation among bending moment, slope, deflection and radius of curvature, (no derivation).Double integration method to find slope and deflection of simply supported beams subjected to concentrated load	1
	3rd	12-01-2026	Monday	Double integration method to find slope and deflection of simply supported beams subjected to udl .Cantilever subjected to udl and concentrated load over the entire span.	
		13-01-2026	Tuesday	Numericals	
19-01-2026		Monday	Numericals	1	

4th	20-01-2026	Tuesday	Macaulay's method for slope and deflection, application to simply supported beam load and uniformly distributed load on entire span.	1
	21-01-2026	Wednesday	Macaulay's method for slope and deflection, application to cantilever beam subjected to concentrated and uniformly distributed load over the entire span	1
5th	27-01-2026	Tuesday	Numericals	1
	28-01-2026	Wednesday	Class Test 1	1
			CHAPTER 3:Determinate and Indeterminate structures(Fixed and continuous Beam)	10
1st	02-02-2026	Monday	Concept of Determinate and Indeterminate structures • Concept of fixity, effect of fixity, advantages and disadvantages of fixed beam over simply supported beam	1
	03-02-2026	Tuesday	• Principle of superposition, Fixed end moments from first principle for beam subjected to point load, UDL over entire span	1
	04-02-2026	Wednesday	•Application of standard formulae in finding end moments, end reactions and drawing S.F. and B.M. diagrams for a fixed beam.Numericals	1
2nd	09-02-2026	Monday	Numericals	1
	10-02-2026	Tuesday	Numericals	1
	11-02-2026	Wednesday	Definition, effect of continuity, nature of moments induced due to continuity, concept of deflected shape, practical examples.	1
3rd	16-02-2026	Monday	Clapeyron's theorem of three moment (no derivation), Application of Clapeyron's theorem maximum up to three spans and two unknown support moment only, Support at same level spans having same and uniform moment of inertia subjected to concentrated loads and uniformly distributed loads over entire span	1
	17-02-2026	Tuesday	Support at same level spans having same and uniform moment of inertia subjected to uniformly distributed loads over entire span.	1
	18-02-2026	wednesday	Numericals	1
4th	23-02-2026	Monday	Numericals,	1
			CHAPTER 4: Moment Distribution Method	10
	24-02-2026	Tuesday	Introduction to moment distribution method, sign convention, Carry over factor, stiffness factor, distribution factor.	1
	25-02-2026	Wednesday	Application of moment distribution method to various types of continuous beams subjected to concentrated loads over entire span having same or different moment of inertia, supports at same level, up to three spans and two unknown support moments only.	1

MA R	1st	02-03-2026	Monday	Application of moment distribution method to various types of continuous beams subjected to uniformly distributed load over entire span having same or different moment of inertia, supports at same level, up to three spans and two unknown support moments only.	1
	2nd	09-03-2026	Monday	Numericals	1
		10-03-2026	Tuesday	Numericals	1
		11-03-2026	Wednesday	Numericals	1
	3rd	16-03-2026	Monday	Numericals	1
		17-03-2026	Tuesday	Numericals	1
		18-03-2026	Wednesday	Introduction to portal frames – Symmetrical and unsymmetrical portal frames with the concept of Bays and stories.	1
	4th	23-03-2026	Monday	Numericals	1
				CHAPTER 5:Types of Trusses	1
		24-03-2026	Tuesday	Types of trusses (Simple, Fink, compound fink, French truss, pratt truss, Howe truss, North light truss, King post and Queen post truss)	1
		25-03-2026	Wednesday	Calculate support reactions for trusses subjected to point loads at joints	1
	5th	30-03-2026	Monday	Numericals	1
		31-03-2026	Tuesday	Calculate forces in members of truss using Method of joints	1
	APR	2nd	06-04-2026	Monday	Numericals
07-04-2026			Tuesday	Calculate forces in members of truss using Method of sections.	1
08-04-2026			Wednesday	Numericals	1
3rd		13-04-2026	Monday	class Test 2/Internal	1
		15-04-2026	Wednesday	Doubt Clearance	1