LESSON PLAN

SUMMER (2025-26)

DISCIPLINE: Civil Engineering
SEMESTER: 4th FROM DATE :22/12/2025 TO DATE: 18/04/2026
NAME OF THE TEACHING FACULTY:- Er. Radhashyam Jena
SUBJECT:- Theory of Structure (CEPC204 TH-2)
NO.OF PERIOD/PER WEEK CLASS ALLOTTED:- 4
TOTAL NO. OF CLASSES ALLOTED AS PER SYLLABUS: 68
TOTAL NO. OF CLASS AVAILABLE IN SEMESTER: 62

SL NO.	WEEK	TOPIC	TEACHING AID
1	22-12-2025 to 27-12-2025	UNIT —I Direct and Bending Stressesin vertical members • Introduction to axial and eccentric loads, eccentricity about one principal axis only, nature of stresses, Maximum and minimum stresses, resultant stresses and distribution diagram	White board ,Marker
		UNIT —I Direct and Bending Stresses in vertical members • Introduction to axial and eccentric	White board ,Marker
2	29-12-2025 to 03-01-2026	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.	White board ,Marker
		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.	White board ,Marker
		Condition for no tension or zero stress at extreme fiber, Limit of eccentricity, core of section for	White board ,Marker

3	05-01-2026 to 10-01-2026	Chimneys of circular cross section subjected to wind pressure, Maximum and minimum stresses, resultant stresses and distribution diagram at base.	White board ,Marker
		Anaiysis of dams subjected to horizontal water pressure, conditions of stability, Maximum and minimum stresses, resultant stresses and distribution diagram at base.	White board ,Marker
		Analysis of dams subjected to horizontal water pressure, conditions otstabiiity, Maximum and minimum stresses, resultant stresses and distribution diagram at base.	White board ,Marker
4	12-01-2026 to 17-01-2026	UNIT -II Slope and Deflection Concept Of slope and deflection, stiffness of beams, Relation among bending moment, slope, deflection and radius of curvature	White board ,Marker
		UNIT—II Slope and Deflection Concept of slope and deflection, stiffness of beams, Relation among bending moment, slope, deflection and radius of curvature	White board ,Marker

5	19 - 01 - 2026 to 24-01 - 2026	Double integration method to find slope and deflection of cantilever and simply supported beams subjected to concentrated load and uniformly distributed load on entire span.	White board ,Marker
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6	26-01-26 to 31-01-2026	Double integration method to find slope and deflection of cantilever and simply supported beams subjected to concentrated load and uniformly distributed load on entire span.	White board ,Marker
		Double integration method to find slope and deflection of cantilever and simply supported beams	White board ,Marker
		Double integration method to find slope and deflection of cantilever and simply supported beams subjected to concentrated load and uniformly distributed load on entire span.	White board ,Marker
7	02-02-2026 to 07-02-2026	MacaulaVs method for slope and deflection, application to cantilever and simply supported beam subjected to concentrated and uniformly distributed load on entire span.	White board ,Marker
		Macaulay*s method for slope and deflection. application to cantilever and simply supported beam subjected to concentrated and uniformly distributed load on entire span.	White board ,Marker
		Macaulay's method for slope and deflection, application to cantilever and simply supported beam subjected to concentrated and uniformly distributed load on entire span.	White board ,Marker
8	09-02-2026 to 14-02-2026	Macaulay's method for slope and deflection, application to cantilever and simply supported beam subjected to concentrated and uniformly distributed load on entire span.	White board ,Marker
		UNIT —III Determinate and Indeterminate structures(Fixed and Continuous Beam)Concept of Determinate and Indeterminate structures	White board ,Marker
		Concept of fixity, effect of fixity, advantages and disadvantages of fixed beam over	White board ,Marker
9	16-02-2026 to 21-02-	Concept of fixity, effect of fixity, advantages and disadvantages of fixed beam over simply supported beam.	White board ,Marker
		Concept of fixity, effect of fixity, advantages and disadvantages of fixed beam over simply supported beam.	White board , Marker

	2026	Principle of superposition, Fixed end moments from first principle for beam subjected to point load, UDL	White board ,Marker
10	23-02-2026 to 28-02-2026	• Application of standard formulae in finding end moments, end reactions and drawing S.F. and B.M. diagrams for a fixed beam. • Definition, effect of continuity, nature of moments induced due to continuity, concept of deflected shape, Definition, effect of continuity, nature of moments induced due to continuity, concept of deflected shape,	White board ,Marker
11	02-03-2026 to 07-03-2026	• 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.	White board ,Marker
12	09-03-2026 to 14-03-2026	• lapeyron'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. • Clapeyron's theorem of three moment 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. • 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 I subiected to concentrated loads and uniformly distributed loads over	White board ,Marker

		entire span.	
13	16-03-2026 to 21-03-2026	• Clapeyron's theorem of three moment (no derivation),Application of Clapeyron's theorem1 • Concept of influence line diagram (ILD) 19-03-2026 1 • Concept of influence line diagram (ILD)	White board ,Marker
14	23-03-2026 14 to 28-03-2026	• UNIT-IV TOPIC Moment distribution method Introduction to moment distribution method, sign convention, Carry over factor, stiffness factor, distribution factor. • UNIT-IV Moment distribution method Introduction to moment distribution method, sign convention, Carry over factor, stiffness factor, distribution factor.	White board ,Marker
15	30-03- 2026 to 04-04-2026	• UNIT-IV TOPIC Moment distribution method Introduction to moment distribution method, sign convention, Carry over factor, stiffness factor, distribution factor. • UNIT-IV Moment distribution method Introduction to moment distribution method, sign convention, Carry over factor, stiffness factor, distribution factor.	White board ,Marker
16	06-04-2026 to 11-04-2026	• Application of moment distribution method to various types of continuous beams subjected to concentrated loads and 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. • UNIT-V Simple trusses Types of trusses (Simple, Fink, compound fink, French truss, pratt truss, Howe truss, North light truss, King post and Queen post truss)	White board ,Marker
17	13-04-2026 17 to 18-04-2026	• Calculate support reactions for trusses subjected to point loads at joints Calculate forces in members of truss using Method of joints and Method of sections.	White board ,Marker

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SIGNATURE OF H.O.D

Radhashyam Jena

SIGNATURE OF FACULTY