GOVT.POLYTECHNICMAYURBHANJ ,LESSONPLAN-2025/26

ENGG.		Semester:3rdSem		Name of theTeachingFaculty: Thakura Hansdah
SUBJECT:STRENGTH OF MATERIAL		No.of Days/Per week class allotted:03	CHAPTER	SemesterFromdate:14.07.2025ToDate:15.11.2025
MONTH	Week	DAY		TOPIC
JULY	3RD	*2ND*	CHAPTER -1	**1.0 Simple stress& strain** 1.1 Types of load, stresses & strains,(Axial and tangential) Hooke's law, Young's modulus,
		3RD		bulk modulus, modulus of rigidity, Poisson's ratio, derive the relation between three elastic caonstant
		4TH		Derive the relation between three elastic constants,
	4TH	*2ND*		1.2 Principle of super position, stresses in composite section
		3RD		1.3 Temperature stress, determine the temperature stress in composite bar (single core)
		4TH		1.4 Strain energy and resilience, Stress due to gradually applied, suddenly applied and impact load
	5TH	*2ND*	CHAPTER-2	**Solve of simple problem**
		3RD		Solve of simple problem
		4TH		**2.0 Thin cylinder and spherical shell under internal pressure** 2.1 Definition of hoop and longitudinal stress, strain
		5TH		**REMEDIAL CLASS**
	1ST	*2ND*		longitudinal strain and volumetric strai
		3RD		2.3Computation of the change in length, diameter and volume
		4TH		**Computation of the change in length, diameter and volume**
		5th		Computation of the change in length, diameter and volume
	2ND	*2ND*		REVISION
		3RD		Solve of simple problem

AUGUST		4TH		Solve of simple problem
	3RD	*2ND*	chapter-3	**3.0 Two dimensional stress systems** Introduction of Normal stress, Principal plan, shear stress etc
		3RD		3.1 Determination of normal stress, shear stress and resultant stress on oblique plane
		4TH		3.1 Determination of normal stress, shear stress and resultant stress on oblique plane
		5th		CLASS TEST-1
	4TH	*2ND*		3.3 Location of principal plane and computation of principal stress andMaximum shear stress using Mohr's circle
		3RD		3.3 Location of principal plane and computation of principal stress andMaximum shear stress using Mohr's circle
		4TH		Question Discussion
	5TH	*2ND*	CHAPTER-4	**4.0 Bending moment& shear force** 4.1 Types of beam and load
		3RD		4.2 Concepts of Shear force and bending moment of cantilevern beam with ponted load
		4TH		4.2 Concepts of Shear force and bending moment of
		5TH		cantilevern beam UDL
SEPTEMBER	1ST	*2ND*		Shear Force and Bending moment diagram and its salient features illustration in , simply supported beam under point load .
		3RD		Shear Force and Bending moment diagram and its salient features illustration in , simply supported beam under UDL
		4TH		Solve numerical problem cantilever .simply supported and over hanging beam
		5TH		**REMEDIAL CLASS**
	2ND	*2ND*		Solve numerical problem cantilever .simply supported and over hanging beam
		3RD		Solve numerical problem cantilever .simply supported and over hanging beam
		4TH		Solve numerical problem cantilever .simply supported and over hanging beam
	3RD	*2ND*	chapter-5	**5.0 Theory of simple bending.** 5.1 Assumptions in the theory of bending,
		3RD		5.2 Bending equation, Moment of resistance, Section modulus& neutral axis.
		4TH		5.2 Bending equation, Moment of resistance, Section modulus& neutral axis.

		5TH		**INTERNAL ASSESMENT**
	4TH	*2ND*		5.3 Solve simple problems.
		3RD	CHAPER-6	**6.0 Combined direct & bending stresses** 6.1 Define column Axial load, Eccentric load on column,
		4TH		6.3 Direct stresses, Bending stresses, Maximum& Minimum stresses. Numerical problems on above
		5TH		6.3 Direct stresses, Bending stresses, Maximum& Minimum stresses. Numerical problems on abo
OCTOBER	1ST	*4TH*		6.4 Buckling load computation using Euler's formula (no derivation) inColumns with various end conditions
	2ND	*2ND*	chapter-7	**7.0 Torsion** **7.1 Assumption of pure torsion**
		3RD		7.2 The torsion equation for solid shaft
		4TH		The torsion equation for solid shaft
		1st		**The torsion equation for solid shaft**
	3RD	*2ND*		7.2 The torsion equation for solid shaft
		3RD		7.1 The torsion equation for hollow circular shaft
		4TH		7.1 The torsion equation for hollow circular shaft
		5TH		7.2 Comparison between solid and hollow shaft subjected to pure torsion and solvr the numerical problem on above.
	4TH	*2ND*		7.2 Comparison between solid and hollow shaft subjected to pure torsion and solvr the numerical problem on above.
		3RD		SOLVE SIMPLE NUMERICAL PROBLEM
		4TH		SOLVE SIMPLE NUMERICAL PROBLEM
		5TH		Comparison between solid and hollow shaft subjected to pure torsion and solvr the numerical problem on above
	5TH	*2ND*		7.2 Comparison between solid and hollow shaft subjected to pure torsion and solvr the numerical problem on above.
		3RD		SOLVE SIMPLE NUMERICAL PROBLEM
		4TH		REVISION
		5TH		REVISION
NOVEMBER	2ND	*2ND*		SOLVE SIMPLE NUMERICAL PROBLEM
		3RD		REVISION
		4TH		CLASS TEST-2
	3RD	*2ND*		REVISION
		3RD		REVISION