


Lesson Plan

Subject: STRENGTH OF MATERIAL(Th 2) Name of faculty: SARBESWAR ROUT

Semester: 3rd Class allotted: 4p/week Branch: Mechanical Session: 2023-W

Discipline	Semester	From date:	To date:	Teaching Aid
Subject:	No. of days/ per week	Theory/ Practical –Topics/Lesson		
Week	Date/Period			
1	01/08/2023	1.0 Simple stress& strain		White Board
	to	1.1 Types of load, stresses & strains,		Marker
	05/08/2023	Hooke's law, Young's modulus, bulk modulus		Smart board
		modulus of rigidity, Poisson's ratio, derive the relation between three elastic constants,		
2	07/08/2023	1.2 Principle of super position		White Board
	to	stresses in composite section		Marker
	12/08/2023	1.3 Temperature stress, the temperature stress in composite bar (single core)		Smart board
		1.4 Strain energy and resilience,		
3	14/08/2023	Stress due to gradually applied,		White Board
	to	suddenly applied and impact load		Marker
	19/08/2023	1.5 Simple problems on above.		Smart board
		2.0 Thin cylinder and spherical shell		
4		2.1 Definition of hoop		
	21/08/2023	longitudinal stress, strain		White Board
	to	2.2 Derivation of hoop stress		Marker
	26/08/2023	longitudinal stress, hoop strain, longitudinal strain and volumetric strain		Smart board
5		2.3 Computation of the change in length, diameter and volume		
	28/08/2023	2.4 Simple problems on above		White Board
	to			Marker
	02/09/2023	3.0 Two dimensional stress systems		Smart board
6		3.1 Determination of normal stress shear stress and resultant stress on oblique plane		
	04/09/2023	3.2 Location of principal plane		White Board
	to	Location of principal plane and computation of principal stress		Marker
	09/09/2023	computation of principal stress		Smart board
7		computation of principal stress		
	11/09/2023	3.3 Location of principal plane and computation of principal stress		White Board
	to	and Maximum shear stress using Mohr's circle		Marker
	16/09/2023			Smart board


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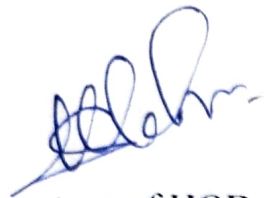

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Week	Date/Period	Theory/ Practical Topics/Lesson	Teaching Aid
8	18/09/2023	4.0 Bending moment & shear force	White Board
	to	4.1 Types of beam and load	Marker
	23/09/2023	4.2 Concepts of Shear force and bending moment Shear force and bending moment Shear force and bending moment	Smart board
9	25/09/2023	4.3 Shear Force and Bending moment diagram	White Board
	to	and its salient features illustration in cantilever beam, simply supported beam	Marker
	30/09/2023	and over hanging beam under point load and uniformly distributed load	Smart board
10		Shear Force and Bending moment diagram	White Board
	03/10/2023	Shear Force and Bending moment diagram	Marker
	to	5.0 Theory of simple bending	Smart board
11	07/10/2023	5.1 Assumptions in the theory of bending,	
	09/10/2023		
	to	Internal Exam	
12	14/10/2023		
	16/10/2023	Assumptions in the theory of bending,	White Board
	to	5.2 Bending equation, Moment of resistance,	Marker
13	20/10/2023	Bending equation, Moment of resistance,	Smart board
		Bending equation, Moment of resistance,	
	30/10/2023	Section modulus & neutral axis.	White Board
14	to	Section modulus & neutral axis.	Marker
	04/11/2023	5.3 Solve simple problems.	Smart board
		Solve simple problems.	
15		6.0 Combined direct & bending stresses	White Board
	06/11/2023	6.1 Define column	Marker
	to	6.2 Axial load, Eccentric load on column,	Smart board
	11/11/2023	6.3 Direct stresses, Bending stresses, Maximum & Minimum stresses. Numerical problems on above.	
16	13/11/2023	6.4 Buckling load computation using Euler's formula (no derivation) in Columns with various end conditions	White Board
	to	Continue...	Marker
	18/11/2023	7.0 Torsion	Smart board
17		7.0 Assumption of pure torsion	
		7.1 The torsion equation for solid and hollow circular shaft	White Board
	20/11/2023	7.2 Comparison between solid and hollow shaft subjected to pure torsion	Marker
	to	Revision...	Smart board
	25/11/2023	Revision...	

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17	28/11/2023	Revision...	White Board
	to	Revision...	Marker
	30/11/2023	Revision...	Smart board
		Revision...	



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