

LESSON PLAN

Period	Date (Tentative)	Topic	Unit No.	Teaching Methodology	Remarks	Corrective Action Upon Review
1/2	21/12/15	General considerations in design of engineering materials and their properties.	I			
1/2	22/12/15	Material selection and Manufacturing considerations in design	I			
1/2	28/12/15	Simple stresses, Combined stresses, Torsional & bending stresses, Impact stress, stress-strain relation, Pre-Yield numbers.	I			
1/2	29/12/15	Various theories of failure, F.O.S., Design for strength and rigidity, static strength.	I			
1/2	4/1/16	Concept of stiffness in tension, bending, torsion and combined situation Design based on fracture toughness.	I			
1/2	5/1/16	Stress concentration, Theoretical stress concentration factor, Fatigue stress concentration factors	I			
1/2	11/1/16	Notch sensitivity, Design for fluctuating stresses	I			
1/2	12/1/16	Endurance limit, Estimation of endurance strength.	I			
1/2	18/1/16	Goodman line, Soderberg line, Gerber parabola relations.	I			
1/2	19/1/16	Design of riveted joints with initial stress, Eccentric loading.	II			

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1/2	25/1/16	Design of Boiler joints,	<u>II</u>			
		Design of longitudinal butt joints for a boiler				
1/2	1/2/16	Design of circumferential	<u>II</u>			
		lap joints for a boiler, Lozenge joints.				
1/2	2/2/16	Design of welded joints with initial stresses,	<u>II</u>			
		Eccentric loading and solving problems				
1/2	8/2/16	Strength of transverse fillet welded joints	<u>II</u>			
		and solving problems				
1/2	9/2/16	Strength of Parallel	<u>II</u>			
		fillet welded joints, special case of fillet welded joints				
1/2	15/2/16	Asymmetrically loaded	<u>II</u>			
		unsymmetrical welded sections.				
1/2	16/2/16	Polar moment of Inertia	<u>II</u>			
		and section modulus of welds.				
←	18/2/2016 to 20/2/2016	I MID EXAMS				
1/2	21/2/16	Design of bolted joints, Pre-stresses, Design of	<u>III</u>			
		bolted joints under eccentric loading.				
1/2	23/2/16	Locking devices, Bolts of uniform strength	<u>III</u>			
		Differential stresses.				
1/2	29/2/16	Stress in a thin cylindrical shell due to internal pressure, Hoop stress,	<u>III</u>			

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		Longitudinal stress				
1/2	1/3/2016	change in dimensions of a thin cylindrical shell due to internal pressure.	III			
		change in dimensions of a thin spherical shell due to internal pressure.				
1/2	8/3/16	Thick cylindrical shell	III			
		subjected to internal pressure.				
1/2	14/3/16	Compound cylindrical shell and their stresses	III			
		cylindrical heads and cover plates.				
1/2	15/3/16	Design of keys,	IV			
		stresses in keys, - cotter joints.				
1/2	21/3/16	Spigot and socket	IV			
		sleeve and cotter joints				
1/2	22/3/16	Knuckle joints	IV			
		Knuckle joints				
←	24/3/16 to 26/3/16	IP MID EXAMS				→
1/2	28/3/16	Design of solid and hollow shafts for strength and rigidity.	IV			
1/2	29/3/16	Design of shafts for combined bending and axial loads.	IV			
1/2	4/4/16	Shaft nips, BIS code, use of internal & external clutches, gaskets and seals (stationary & rotary)	IV			

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Period	Date (Tentative)	Topic	Unit No.	Teaching Methodology	Remarks	Corrective Action Upon Review
1/2	11/4/16	Rigid couplings, muff, coupling,	V			
		split - muff and flange couplings.				
1/2	12/4/16	Flexible couplings,				
		flange coupling (molded - fixed)				
1/2	18/4/16	stresses and deflection of helical springs.				
1/2	19/4/16	E.. tension and compression of springs,				
1/2	25/4/16	spring for fatigue loading, energy stored capacity				
1/2	26/4/16	helical-torsion spring, conical springs, Leaf springs.				
←	28/4/16 to 30/4/16	III MID EXAM				
←	02/5/16 to 07/05/16	preparation.				