SESSION				WINTER 2022	
BRANCH:				MECHANICAL ENGINEERING	
SEMESTER:				3RD SEC-B	
SUBJECT:				STRENGTH OF MATERIAL (th-2)	
NAME OF THE FACULTY:				R L DASH	
SL NO.	MONTH	No. of academic days available for the subject	DATE	TOPICS TO BE COVERED	% COVERED
1	Sep-22	9	19.9.22	1.1Types of load, stresses & strains,(Axial and tangential) Hooke's law	18%
			20.9.22	Young's modulus, bulk modulus, modulus of rigidity, Poisson's ratio	
			22.9.22	derive the relation between three elastic constants	
			23.9.22	derive the relation between three elastic constants	
			24.9.22	Simple problems on above	
			26.9.22	Simple problems on above	
			27.9.22	1.2Principle of super position, stresses in composite section	
			29.9.22	1.3Temperature stress, determine the temperature stress in composite bar (single core)	
			30.9.22	1.4Strain energy and resilience, Stress due to gradually applied, suddenly applied and impact load	
2	Oct-22	15	10.10.22	1.5Simple problems on above	29%
			11.10.22	Simple problems on above	
			13.10.22	2.1Definition of hoop and longitudinal stress, strain	
			14.10.22	2.2Derivation of hoop stress, longitudinal stress, hoop strain, longitudinal strain and volumetric strain	
			15.10.22.	Derivation of hoop stress, longitudinal stress, hoop strain, longitudinal strain and volumetric strain	
			17.10.22	2.3Computation of the change in length, diameter and volume	
			18.10.22	2.4Simple problems on above	
			20.10.22	Simple problems on above	
			21.10.22	Simple problems on above	
			22.10.22	Simple problems on above	
			25.10.22	Simple problems on above	
			27.10.22	3.1Determination of normal stress, shear stress and resultant stress on oblique plane	
			28.10.21	Determination of normal stress, shear stress and resultant stress on oblique plane	

			29.10.22	3.2Location of principal plane and computation of principal stress	
			31.10.22	3.3Location of principal plane and computation of principal stress	
3	Nov-22	14	1.11.22	Maximum shear stress using Mohr's circle	28%
			3.11.22	Simple problems on above	
			4.11.22	Simple problems on above	
			5.11.22	Simple problems on above	
			10.11.22	4.1Types of beam and load	
			11.11.22	4.2Concepts of Shear force and bending moment	
			12.11.22	4.3Shear Force and Bending moment diagram and its salient features illustration in cantilever beam	
			21.11.22	simply supported beam and over hanging beam under point load and uniformly distributed load	
			22.11.22	simply supported beam and over hanging beam under point load and uniformly distributed load	
			24.11.22	simply supported beam and over hanging beam under point load and uniformly distributed load	
			25.11.22	Simple problems on above	
			26.11.22	Simple problems on above	
			28.11.22	Simple problems on above	
			29.11.22	5.1Assumptions in the theory of bending	
4	Dec-22	13	1.12.22	5.2Bending equation, Moment of resistance	25%
			2.12.22	Section modulus& neutral axis	
			3.12.22	5.3Solve simple problems	
			5.12.22	Solve simple problems	
			6.12.22	Solve simple problems	
			8.12.22	Solve simple problems	
			9.12.22	6.1Define column	
			10.12.22	Define column	
			12.12.22	6.2Eccentric load on column	
			13.12.22	Eccentric load on column	
			15.12.22	Solve simple problems	
			16.12.22	Solve simple problems	
			17.22.22	Solve simple problems	
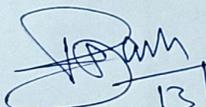
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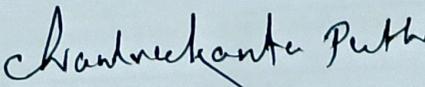
Rajeeb Lochan Dash