

PNS School of engineering and technology

Branch : Civil Engineering

SEMESTAR;3RD

Name of the faculty : SUDEEPTA MISHRA

SUJECT NAME: SM {TH-1}

WEEK	Date	Topic theory
SPETEMBER 2 ND	15.09.22	Basic principle of mechanis,force ,moment,
	16.09.22	Suppot condition, conditions of equilibrium.
3rd	19.9.22	C.G and M.I free body diagram.
	20.09.22	c.G and M.I free body diagram contineuing.....
	21.09.22	Review of C.G AND M.I of different sections.
	22.09.22	Introduction to stresses and strains.
	23.09.22	mechanical mechanical properties of materieal.
	24.09.22	Type of stresses -tensile, compressive and shear stresses.
4th	26.09.22	Types of strain- Tensile,compressive,and shear strains.
	27.09.22	complimentary shear stress-Diagonal tensile / compressive stresses deu to shear.
	28.09.22	Elogation and contraction
	29.09.22	longitudinal &lateral strain,poisson ration, volumetric strain.
	30.09.22	Hook's law-elastic constant derivation of relation between elastic constant
OCTOBER 2ND	11.10.22	Behaviour of ducttile and brittle materials under direct load.
	12.10.22	stress strain curve of a ductile material, limit of propertionality elastic limit,yield stress ,ultimate stress ,breaking stress.
	13.10.22	princippal stresses and straiions, occourance of normal and tangential stresses.
	14.10.22	principal stresses and principal planes,major or minor principal stresses.
	15.10.22	Mhor's circle and application to solve problems of complex stresses.
3RD	18.10.22	types of load, types of support, types of beam.
	19.10.22	calculation of support reactions using equation of static equilibrium.
	20.10.22	contineuing the equation of static equilibrium.
	21.10.22	shearforce and bending moment,sign convention for SF,BM.
	22.10.22	In general cases of determinste beam with concentrated loads and UDL calculation
4th	26.10.22	calculation reaction with BM and SM of simply supported beam.
	27.10.22	contineuing the simply supported beam problems...
	28.10.22	calculation reaction with BM and SM of cantilever beam.
	29.10.22	contineuing the cantileve beam problems...
	31.10.22	calculation reaction with BM SM of over hanging beam.
NOVEMBER		
1ST	1.11.22	contineuing the overhanging beam problems.....
	2.11.22	position of maximum BM point of contraflexture.
	3.11.22	reaction between intensity of load SF and BM

	4.11.22	slope and deflection nature of elastic curve {deflection curve}
	5.11.22	relationship between slope and deflection and curvature {no derivation}
2ND	09.11.22	continuing the relation relation of slope and deflection and curvature.
	10.11.22	slope and deflection of simply supported beam under concentrated load.
	11.11.22	slope and deflection of simply supported beam under UDL.
	12.11.22	continuing both UDL AND concentrated
	14.11.22	slope and deflection of cantilever beam with {concentrated load}
3rd	15.11.22	slope and deflection of cantilever beam with {UDL}
	17.11.22	continuously slope and deflection of cantilever beam with UDL and concentrated load.
	18.11.22	slope and deflection of beam with methods continuing....
	19.11.22	double integration, Macaulay's methods.
	21.11.22	slope and deflection method chapter completed.
4TH	22.11.22	columns and struts definition short and long columns.
	23.11.22	Equivalent length/effective length, slenderness ratio.
	24.11.22	axially loaded short and long column.
	25.11.22	Euler's theory of long columns.
	26.11.22	critical load for columns with different end condition.
5TH	28.11.22	continuing the different end condition
	29.11.22	continuing....
	30.11.22	TRUSSES-types of trusses .statically determinate and indeterminate trusses.
DECEMBER		
1ST	01.12.22	continuing as well as....
	02.12.22	Degree of indeterminacy, stable and unstable trusses, advantages of trusses.
	03.12.22	this will be continuing....
2ND	5.12.22	Analysis of trusses starts .
	6.12.22	method of joints .
	7.12.22	continuing method of joints.
	8.12.22	method of section.
	9.12.22	continuing method of section.
	10.12.22	trusses problems ending.
3RD	12.12.22	stresses in beam and shafts .bending stress in beam .theory of simple bending.
	13.12.22	Assumption-moment of resistance.
	14.12.22	equation for flexure flexural stress distribution.
	15.12.22	continuing as well as....
	16.12.22	curvature of beam -position of N.A and centroidal axis.
	17.12.22	flexural rigidity significance of section modulus.
4TH	19.12.22	continuing the stress in beam and shaft.
	20.12.22	concept of torsion basic assumption of pure torsion.
	21.12.22	torsion of solid and hollow circular section ,polar moment of inertia.
	22.12.22	Torsional shearing stress angle of twist torsional rigidity.

Sudeepa Mishra

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