



G H RAISONI COLLEGE OF ENGINEERING NAGPUR

(An Autonomous Institute affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)

CRPF Gate No.3, Hingna Road, Digidoh Hills, Nagpur. Maharashtra-440016 (India)

Course wise Teaching Plan for Session : Summer Term 2018

Course : Strength of Materials

Faculty : pbbpatil - Mr. Prakash B. Patil

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Unit-I Mechanical Properties and uniaxial Problems Types of force distribution, Concept of stress and strain,	02/05/2018	BCEL212	A
1	2	Mechanical Properties and uniaxial Problems Types of force distribution, Concept of stress and strain,	02/05/2018	BCEL212	A
1	3	Numerical on Mechanical Properties and uniaxial Problems Types of force distribution, Concept of stress and strain,	04/05/2018	BCEL212	A
1	4	Stress strain behavior of ductile and brittle material in uniaxial state of stress.	04/05/2018	BCEL212	A
1	5	Stress strain behavior of ductile and brittle material in uniaxial state of stress.	07/05/2018	BCEL212	A
1	6	Numerical on Stress strain behavior of ductile and brittle material in uniaxial state of stress.	07/05/2018	BCEL212	A
1	7	Numerical on Stress strain behavior of ductile and brittle material in uniaxial state of stress	08/05/2018	BCEL212	A
1	8	Uniaxial loading and deformation of simple cases of statically indeterminate problems under axial loading. Thin walled pressure vessel, Cylindrical and spherical subjected to internal pressure	08/05/2018	BCEL212	A
1	9	Elastic, Plastic and strain hardened zones stress - strain relations, Elastic constants, Relation between elastic constants.	09/05/2018	BCEL212	A
1	10	Numerical on Relation between elastic constants. Uniaxial loading and deformation of simple cases of statically indeterminate problems under axial loading.	09/05/2018	BCEL212	A
1	11	Determination of axial forces and Bending moment at a section,	11/05/2018	BCEL212	A
1	12	Unit-II Axial Force, Shear Force & Bending Moment Diagrams Concept of free body diagram, Types of loads,	11/05/2018	BCEL212	A



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Unit	Topic Code	Topic Covered	Date	Course	Section
1	13	Numerical on Determination of axial forces and Bending moment at a section,	14/05/2018	BCEL212	A
1	14	Numerical on Determination of axial forces and Bending moment at a section,	14/05/2018	BCEL212	A
1	15	Axial forces SF and BM diagram in beams and simple frames,	15/05/2018	BCEL212	A
1	16	Numerical on Axial forces SF and BM diagram in beams and simple frames,	15/05/2018	BCEL212	A
2	17	Differential relation between shear force and bending moment, Relation between load and shear force.	16/05/2018	BCEL212	A
1	18	Numerical on Differential relation between shear force and bending moment, Relation between load and shear force.	16/05/2018	BCEL212	A
2	19	Unit-III Stresses in Beam, Bending stresses in simple beam, Assumptions and derivation of simple bending,	18/05/2018	BCEL212	A
2	20	Numerical on Bending stresses in simple beam, Assumptions and derivation of simple bending,	18/05/2018	BCEL212	A
2	21	Theory relation between bending moment, Bending stress and curvature.	21/05/2018	BCEL212	A
2	22	Numerical on Homogeneous and composite beams.	21/05/2018	BCEL212	A
2	23	Numerical on Theory relation between bending moment, Bending stress and curvature. Homogeneous and composite beams.	22/05/2018	BCEL212	A
2	24	Shear stresses in simple beams, Shear flow and shear stress distribution, Shear Stress in composite beams. Combined effect of bending and axial force	22/05/2018	BCEL212	A
2	25	Numerical on Shear Stress in composite beams. Combined effect of bending and axial force	23/05/2018	BCEL212	A
2	26	Shear Stress in composite beams. Combined effect of bending and axial force	23/05/2018	BCEL212	A



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Unit	Topic Code	Topic Covered	Date	Course	Section
2	27	Unit -IV Torsion of Shafts: Torsion of circular sections, Assumptions and derivation of relations between torsional moment, Shear stresses and angle of twist.	25/05/2018	BCEL212	A
2	28	Numerical on Torsion of circular sections torsional moment, Shear stresses and angle of twist.	25/05/2018	BCEL212	A
3	29	Torsional stress in solid and Circular sections, Torsion in thin walled hollow section,	28/05/2018	BCEL212	A
3	30	Closely coiled helical springs. Leaf spring.	28/05/2018	BCEL212	A
3	31	Unit-V Deflection of Beam: Derivation of differential equation of moment curvature relation,	29/05/2018	BCEL212	A
3	32	Numerical on Torsional stress in solid and Circular sections, Torsion in thin walled hollow section, Closely coiled helical springs. Leaf spring.	29/05/2018	BCEL212	A
3	33	Numerical on Deflection of Beam	30/05/2018	BCEL212	A
3	34	Differential equation relating deflection and moment shear and load	30/05/2018	BCEL212	A
3	35	Numerical on Deflection of Beam due to moment shear and load	01/06/2018	BCEL212	A
3	36	Deflection of simple beams by integration.	01/06/2018	BCEL212	A
3	37	Numerical on Deflection of simple beams by integration.	04/06/2018	BCEL212	A
3	38	Unit-VI State of Stress In Two Dimensions: State of stress in two dimensions, Differential equation of equilibrium, Transformation of stresses	04/06/2018	BCEL212	A
3	39	State of Stress In Two Dimensions: State of stress in two dimensions, Differential equation of equilibrium, Transformation of stresses	05/06/2018	BCEL212	A
3	40	Numerical on State of stress in two dimensions, Differential equation of equilibrium, Transformation of stresses Principal stresses, Maximum shear stresses	05/06/2018	BCEL212	A



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3	41	Mohr's circle, Combined bending and torsion, Combined effect of Torsion and Shear Shear flow in thin walled sections, concept of shear center of thin walled section, Unsymmetrical bending	06/06/2018	BCEL212	A
3	42	Mohr's circle, Combined bending and torsion, Combined effect of Torsion and Shear Shear flow in thin walled sections, concept of shear center of thin walled section, Unsymmetrical bending	06/06/2018	BCEL212	A
4	43	Mohr's circle, Combined bending and torsion, Combined effect of Torsion and Shear Shear flow in thin walled sections, concept of shear center of thin walled section, Unsymmetrical bending	08/06/2018	BCEL212	A
4	44	Mohr's circle, Combined bending and torsion, Combined effect of Torsion and Shear Shear flow in thin walled sections, concept of shear center of thin walled section, Unsymmetrical bending	08/06/2018	BCEL212	A