

Dicipline:	Civil	Semester:	3 rd	Name of the Teaching Faculty	Swarupa Meshram
Subject:	BMCT	No of Days/Week Class Allotted:	5	Semester From date: _____ To date _____	No. of Weeks:

WEEK	Class Day	Theory Topics
	1st	Introduction about steel structure.
	2nd	Common steel structures, with advantages & disadvantages.
	3rd	Types of steel, properties of structural steel
	4th	Rolled steel section, special consideration on steel design.
	5th	
	1st	Structural analysis & design philosophy.
	2nd	Brief review of principles of limit state design.
	3rd	Structural steel fasteners, Bolled connection.
	4th	Classification of bolts, advantages & disadvantages of bolted connection.
	5th	
	1st	Problems on bolted connection.
	2nd	Problems
	3rd	Different terminology, spacing, edge distance of bolt holes.
	4th	Types of bolted connection & problems.
	5th	

WEEK	Class Day	Theory Topics
	1st	Types of action of fasteners, assumption, principles of design
	2nd	problems
	3rd	Strength of plate in a joint, strength of plates in a joint, strength of bearing type bot.
	4th	Problem practice
	5th	
	1st	Reduction factors & shear capacity of I+S for bolts.
	2nd	Analysis & design of joint using bearing type bolt with problems.
	3rd	Efficiency of joint with problems.
	4th	Welded connection advantages & disadvantages of welded connection.
	5th	
	1st	Types of welded joint & specification for welding.
	2nd	Design stress in welded, strength of weld joint with problems.
	3rd	Design of steel tension member common shapes of tension member.
	4th	Maximum value effective slenderness action.
	5th	Problems on tension member

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WEEK	Class Day	Theory Topics
	1st	Analysis & design of tension member.
	2nd	Problem practice on tension member
	3rd	Problems
	4th	Design of compression member - Introduction.
	5th	
	1st	Common shape of compression member.
	2nd	Buckling class of cross-section.
	3rd	Slenderness ratio with problems.
	4th	Design compressive stress
	5th	
	1st	Design strength of compression member with problems.
	2nd	member problems practice on compression.
	3rd	Problems
	4th	Doubt clearing class
	5th	

WEEK	Class Day	Theory Topics
	1st	Analysis & design of compression members.
	2nd	Problems
	3rd	Design of steel beams - Introduction.
	4th	Common cross-section & their classification.
	5th	
	1st	Deflection limits with problems.
	2nd	Web buckling & web crippling
	3rd	Problem practice on compression members.
	4th	Problem practice
	5th	
	1st	Design of laterally supported beams against bending & shear.
	2nd	Problems
	3rd	Problem practice
	4th	class Test
	5th	

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WEEK	Class Day	Theory Topics
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	1st	Design of Tubular steel structure, Round section problem, permissible stresses
	2nd	Problems, Tubular compression steel structure
	3rd	Tension members, problems.
	4th	Joints in tubular trusses
	5th	

	1st	Different types of tubular joints with problems.
	2nd	Design of masonry structure & masonry walls, problems.
	3rd	Design consideration for masonry column & problem.
	4th	Load bearing & Non-load bearing walls, & problem.
	5th	

	1st	Permissible stress, slenderness ratio, & problems.
	2nd	Effective length, Height & thickness
	3rd	Problem on effective length
	4th	Problem practice
	5th	