

Dicipline:	Civil Engg.	Semester:	5th	Name of the Teaching Faculty:	Pratiksha Shrivastava
Subject:	Structural Design - II	No of Days/Week Class Allotted:	4	Semester From date:	15.09.22 To date 17/09/22
				No. of Weeks:	
WEEK	Class Day	Theory Topics			
1st 15.09.22 to 18.09.22	1st	Introduction about steel structure.			
	2nd	Common steel structures, with advantages and disadvantages.			
	3rd	Types of steel, Properties of structural steel.			
	4th	Rolled steel section, special consideration on steel design.			
	5th				
2nd 19.09.22 to 24.09.22	1st	Structural analysis and design philosophy			
	2nd	Brief review of principles of limit state design.			
	3rd	Structural steel fasteners - Bolted connection			
	4th	Classification of bolts, advantages & disadvantages of bolted connection.			
	5th				
3rd 26.09.22 to 1.10.22	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
4th 10.10.22 to 15.10.22	1st	Types of action of fasteners, assumption principles of design
	2nd	Problems
	3rd	Strengths of plate in a joint, strength of plates in a joint, strength of bearing type joint
	4th	Problem Practice
	5th	
5th 17.10.22 to 22.10.22	1st	Reduction factors, and shear capacity of HSFG 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	
6th 24.10.22 to 29.10.22	1st	Types of welded joint and specification for welding,
	2nd	Design stresses in welded strength of weld joint with problems
	3rd	Design of steel tension member - common shapes of tension member
	4th	Maximum value effective slenderness ratio
	5th	Problems on tension member

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WEEK	Class Day	Theory Topics
7th 31.10.22 to 5.11.22	1st	Analysis and Design of tension member
	2nd	Problem practice on tension member
	3rd	Problems
	4th	Design of compression member - Introduction
	5th	
8th 7.11.22 to 12.11.22	1st	Common shape of compression member
	2nd	Buckling class of cross section -
	3rd	Slenderness ratio with problems
	4th	Design compressive stress
	5th	-Ex.
9th 14.11.22 to 19.11.22	1st	Design Strength of compression member <small>12th problems</small>
	2nd	member Problem Practice on compression
	3rd	Problems
	4th	Doubt clearing class
	5th	

WEEK	Class Day	Theory Topics
10th 21.11.22 to 26.11.22	1st	Analysis and design of compression members.
	2nd	Problems.
	3rd	Design of steel beams - Introduction
	4th	Common cross-section and their classification
	5th	
11th 28.11.22 to 3.12.22	1st	Deflection limits with problems
	2nd	Web buckling and web crippling
	3rd	Problem practice on compression members
	4th	Problem Practice
	5th	
12th 5.12.22 to 10.12.22	1st	Design of laterally supported beams against bending and shear.
	2nd	Problems
	3rd	Problem Practice
	4th	class Test
	5th	



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WEEK Class Day Theory Topics

13th
12.12.22
to
17.12.22

1st	Design of Tubular steel structure - Round sec ^o Problem, Permissible stresses
2nd	Problems, Tubular compression steel structure
3rd	Tension member, Problems,
4th	Joints in tubular trusses.
5th	

14th
19.12.22
to
24.12.22

1st	Different types of tubular joints with problems.
2nd	Design of masonry structure, & masonry walls. Problems
3rd	Design consideration for masonry column Problems.
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	

