Name of the Faculty	**Sandeep Tanwar**
Discipline	**Civil Engineering**
Semester	**6th Semester**
Subject	**Steel Structure Design and Drawing**
Lesson Plan Duration	**16 Weeks (06.03.23 to 23.06.23)**

Details

Week	Theory Day	Topic	Practical Day	Practical Name
1st	1st	Properties of structural steel as per IS Code	1st	Drawing of Fink roof truss with details of joints,
	2nd	Designation of structural steel sections as per IS handbook and IS:800	2nd	fixing details of purlins and roof sheets
	3rd	-do-	3rd	Revision
	4th	Riveted Connection: types of rivet		
2nd	1st	Permissible stresses in rivets, types of riveted joints,	1st	Drawing of slicing of steel columns
	2nd	Specification as per IS800,	2nd	Drawings of slab base , gusseted base and grillage
	3rd	Failure of riveted joint, strength and efficiency of riveted joint	3rd	Base for single section steel column
	4th	Design of Riveted Connection only axially loaded number (No staggered riveting)		
3rd	1st	Numerical Problems on design of riveted connection.	1st	Column beam connection : a) sealed and framed beam to beam connection
	2nd	Bolt Connection: Types of bolt, permissible stresses in bolt,	2nd	Revision
	3rd	types of bolted joints	3rd	Revision
	4th	Specifications for bolted joints as per IS 800.		
4th	1st	Failure of a bolted joint. Assumptions in the theory of bolted joints.	1st	Column beam connection : a) sealed and framed beam to beam connection
	2nd	Strength and efficiency of a bolted joint.	2nd	Revision

	3rd	Design of bolted joints for axially loaded members (No Staggered bolts).	3rd	Revision
	4th	Numerical Problems on design of bolted connection.		
5th	1st	Welded Connection: Types of welds and welded joints,	1st	Column beam connection : b) sealed and framed beam to column connection
	2nd	advantages and disadvantages of welded joints	2nd	Revision
	3rd	Design of fillet and butt weld for axially loaded members	3rd	Revision
	4th	Numerical Problems on design of fillet and butt weld		
6th	1st	-do-	1st	Revision of Roof Truss Drawing
	2nd	Tension Members: Analysis and design of single section tension members and their rivetted and welded connections with gusset plate as per IS:800-2007	2nd	Revision of Roof Truss Drawing
	3rd	-do-	3rd	Revision of Roof Truss Drawing
	4th	Numerical Problems on design of single section tension member		
7th	1st	Numerical Problems on design of single section tension member	1st	Revision of splicing of steel column Drawing
	2nd	Numerical Problems on design of single section tension member	2nd	Revision of splicing of steel column Drawing
	3rd	Analysis and design of double section tension members and their rivetted and welded connections with gusset plate as per IS:800-2007	3rd	Revision of splicing of steel column Drawing
	4th	-do-		
8th	1st	Numerical Problems on design of double section tension member	1st	Revision of base, gusseted base and grillage base
	2nd	Numerical Problems on design of double section tension member	2nd	Revision of base, gusseted base and grillage base

	3rd	Numerical Problems on design of double section tension member	3rd	Revision of base, gusseted base and grillage base
	4th	Analysis and design of single and double angle sections compression members subjected to axial load		
9th	1st	-do-	1st	Revision of column beam connection
	2nd	Numerical Problems on design of single section compression member	2nd	Revision of column beam connection
	3rd	Numerical Problems on design of single section compression member	3rd	Revision of column beam connection
	4th	Numerical Problems on design of double section compression member		
10th	1st	Numerical Problems on design of double section compression member	1st	Revision of sealed and framed beam to column connection
	2nd	Roof Trusses: Form of trusses, pitch of roof truss,	2nd	Revision of sealed and framed beam to column connection
	3rd	spacing of trusses, spacing of purlins	3rd	Revision of sealed and framed beam to column connection
	4th	Connection between purlin and roof covering		
11th	1st	Connection between purlin and principal rafter (no design, only concept)	1st	Plan and elevation of plate girder with details of supports and connection of stiffness
	2nd	Column Bases: Types of column bases i.e. slab base	2nd	flange angles and cover plates with web highlighting
	3rd	Types of column bases i.e. gusseted base	3rd	curtailment of plates
	4th	Concept of buckling, effective Length, slenderness ratio,		
12th	1st	Analysis and Design of axially loaded single section column	1st	Revision of Plate Girder Drawing
	2nd	Numerical problem on axially loaded single section column	2nd	Revision of Plate Girder Drawing
	3rd	Numerical problem on axially loaded single section column	3rd	Revision of Plate Girder Drawing
	4th	Numerical problem on axially loaded single section column		

13th	1st	Analysis and design of single section simply supported laterally restrained steel beams.	1st	Revision of Plate Girder Drawing
	2nd	-do-	2nd	Revision of Plate Girder Drawing
	3rd	Numerical problem on single section simply supported laterally restrained beams	3rd	Revision of Plate Girder Drawing
	4th	-do-		
14th	1st	-do-	1st	Draw a sheet using CAD software
	2nd	Introduction to plate girder and functions of various elements of a plate girder	2nd	Revision of CAD Drawing
	3rd	-do-	3rd	Revision of CAD Drawing
	4th	Fabrication and erection of steel structures like trusses, columns and girders		
15th	1st	-do-	1st	Revision of CAD Drawing
	2nd	Revision	2nd	Revision of all completed drawings
	3rd	Revision	3rd	Revision of all completed drawings
	4th	Revision		
16th	1st	Revision	1st	Revision of all completed drawings
	2nd	Revision	2nd	Revision of all completed drawings
	3rd	Revision	3rd	Revision of all completed drawings
	4th	Revision		