

**Name of the Faculty** MS.NISHA YADAV (Guest Faculty)  
**Discipline** CIVIL ENGG.  
**Semester** 6TH  
**Subject** STEEL STRUCTURE DESIGN  
**Lesson Plan Duration** 15 weeks(from march, 2021 to june,2021)

**\*\* Work Load(Lecture/Practical) per week(in hours):-Lectures : 04**

Week		Theory
	Lecture Day	Topic (inculding assignment/test)
1st	1st	1. Structural Steel and Sections: 1.1 Properties of structural steel as per IS Code
	2nd	1.2 Designation of structural steel sections as per IS handbook and IS:800 - 2007
	3rd	2. Riveted Connections: Types of rivets, permissible stresses in rivets
	4th	types of riveted joints, specifications for riveted joints as per IS 800. Failure of a riveted joint.
2nd	5th	Failure of a riveted joint. Assumptions in the theory of riveted joints.
	6th	Strength and efficiency of a riveted joint.
	7th	Design of riveted joints for axially loaded members ( No Staggered riveting).
	8th	Numerical Problem on Axially loaded rivetted Joints
3rd	9th	Numerical Problem on Axially loaded rivetted Joints
	10th	Revision /Assignments
	11th	3. Bolted and Welded connections: 3.1 Types of bolts and bolted joints
	12th	specifications for bolted joints as per IS: 800 - 2007
4th	13th	3.2 Types of welds and welded joints
	14th	Advantages and disadvantages of welded joints and bolted joints
	15th	Design of fillet and butt weld.
	16th	Plug and slot welds
5th	17th	Numerical problems
	18th	4. Tension Members : Different types of sections used as tension members
	19th	Analysis and design of single angle section tension members

	20th	Numerical Problem on design of single angle section tension member
6th	21th	Numerical Problem on design of single angle section tension member
	22th	Analysis and design of Double angle section tension members
	23th	Numerical Problem on design of double angle section tension member
	24th	Numerical Problem on design of double angle section tension member
7th	25th	Rivetted and welded connections with gusset plate as per IS:800 of single and double angle section tension members
	26th	Numerical problems on single and double angle section members with gusset plate
	27th	Numerical problems on single and double angle section members with gusset plate
	28th	5. Compression Members: Different sections used as compression members
8th	29th	Analysis and design of single angle sections compression members(Struts)
	30th	Numerical problem on analysis and design of single angle sections compression members(Struts)
	31th	Numerical problem on analysis and design of single angle sections compression members(Struts)
	32th	Analysis and design of Double angle sections compression members(Struts)
9th	33th	Numerical problem on analysis and design of Double angle sections compression members(Struts)
	34th	Numerical problem on analysis and design of Double angle sections compression members(Struts)
	35th	6. Roof Trusses : Form of trusses
	36th	pitch of roof truss, spacing of trusses, spacing of purlins,
10th	37th	connection between purlin and roof covering
	38th	Connection between purlin and principal rafter (no design, only concept)
	39th	
	40th	7. Columns: various types of columns
11th	41th	7.1 Concept of buckling of columns, effective length and slenderness ratio,
	42th	permissible stresses in compression as per IS:800 for different end conditions.
	43th	7.2 Types of column bases (Descriptive only)
	44th	7.2 Types of column bases (Descriptive only)

12th	45th	7.3 Beam and column, frame and seated connections (descriptive only, no design)
	46th	7.3 Beam and column, frame and seated connections (descriptive only, no design)
	47th	Numerical problems on columns
	48th	Numerical problems on columns
13th	49th	Revision /Assignments
	50th	8. Beams : Analysis and design of single section simply supported laterally restrained steel beams.
	51th	Introduction to plate girder and functions of various elements of a plate girder
	52th	Revision /Assignments
14th	53th	9 Fabrication and Erection of Steel Structures like trusses, columns and girders
	54th	10 Masonry structures – Design of brick column
	55th	Design of wall foundations
	56th	Design of wall foundations
15th	57th	Revision
	58th	Revision
	59th	Revision
	60th	Revision

