

Lesson Plan

Name of the Faculty:

Discipline: Civil Engineering

Semester: 5th sem

Subject: Steel structure design

Work Load (Lecture/Practical) per week (in hours): Lectures- , Practicals-

Week	Theory		Practical	
	Lecture day	Topic (including assignment/test)	Practical day	Topic
1 st	1 st	Structural Steel and Sections:	1 st	
	2 nd	Properties of structural steel as per IS Code		
	3 rd	Designation of structural steel sections as per IS handbook and IS:800 - 2007		
	4 th	Riveted Connections: (10 hrs) Types of rivets, permissible stresses in rivets,		
2 nd	5 th	types of riveted joints, specifications for riveted joints as per IS 800. Failure of a riveted joint.	2 nd	
	6 th	Assumptions in the theory of riveted joints. Strength and efficiency of a riveted joint		
	7 th	Design of riveted joints for axially loaded members (No Staggered riveting).		
	8 th	Assignment-1		
3 rd	9 th	Bolted and Welded connections:	3 rd	
	10 th	Types of bolts and bolted joints, specifications for bolted joints as per IS: 800 - 2007		
	11 th	Types of welds and welded joints, advantages and disadvantages of welded joints and bolted joints		
	12 th	design of fillet and butt weld. Plug and slot welds		
4 th	13 th	UNIT-1 TEST	4 th	
	14 th	Tension Members		
	15 th	Analysis and design of single		

		and double angle section tension members		
	16 th	their rivetted and welded connections with gusset plate as per IS:800		
5 th	17 th	Numerical problem solved	5 th	
	18 th	Compression Members		
	19 th	Analysis and design of single and double angle sections		
	20 th	compression members (struts)		
6 th	21 st	their welded connections with gusset plate as per IS:800	6 th	
	22 nd	Numerical problem solved		
	23 rd	Numerical problem solved		
	24 th	UNIT TEST-II		
7 th	25 th	Roof Trusses	7 th	
	26 th	Form of trusses,		
	27 th	pitch of roof truss		
	28 th	spacing of trusses		
8 th	29 th	connection between purlin and roof covering	8 th	
	30 th	Connection between purlin and principal rafter (no design, only concept)		
	31 st	Numerical problem solved		
	32 nd	Columns: introductions		
9 th	33 rd	Concept of buckling of columns	9 th	
	34 th	effective length and slenderness ratio		
	35 th	permissible stresses in compression as per IS:800		
	36 th	Assignment-II		
10 th	37 th	Analysis and Design of axially loaded single section steel column	10 th	
	38 th	Stresses for different end conditions		
	39 th	NUMERICAL PROBLEM SOLVED		
	40 th	Types of column bases (Descriptive only)		
11 th	41 st	Beam and column	11 th	
	42 nd	frame and seated connections		
	43 rd	Assignment-III		
	44 th	Beams		
12 th	45 th	simply supported laterally restrained steel beams.	12 th	
	46 th	Introduction to plate girder		
	47 th	functions of various elements of		

		a plate girder		
	48th	Fabrication and Erection of Steel Structures		
13th	49th	like trusses	13th	
	50th	columns and girders		
	51st	Masonry structures		
	52nd	Design of brick column		
14th	53rd	wall foundations	IV	
	54th	NUMERICAL SOLVE		
	55th	Assignment- IV		
	56th	UNIT TEST -III		
15th	57th	REVISION UNIT -I	15th	
	58th	REVISION UNIT -II		
	59th	REVISION UNIT -III		
	60th	REVISION UNIT -IV		