

PCC-CVE308-T- Design of Steel Structures - I

Name of the Faculty	:	Mr. Manik Goyal
Discipline	:	B.Tech in Civil Engineering
Semester	:	VI (3 rd Year)
Subject	:	Design of Steel Structures - I
Lesson Plan Duration	:	15 Weeks

Work Load (Lecture / Practical) per week (in hrs.) : Lectures – 03

Lesson Plan			
Week	Theory		
	Lecture Day	Topic (Including Assignment Test)	Date
1 st	1	Introduction: Properties of structural steel	
	2	I.S. Rolled sections and I.S. specification	
	3	Connections: Importance, various types of connections,	
2 nd	4	Simple and moment resistant, riveted connections.	
	5	Bolted connections.	
	6	Bolted connections.	
3 rd	7	Welded connections.	
	8	Welded connections.	
	9	Design of Tension Members: Introduction, types of tension members,	
4 th	10	net sectional areas,	
	11	design of tension members,	
	12	design of tension members,	
5 th	13	lug angles	
	14	Splices	
	15	Design of Compression Members: Introduction, effective length and slenderness ratio,	
6 th	16	various types of sections used for columns, built up columns, necessity,	
	17	design of built up columns,	
	18	design of built up columns,	
7 th	19	MINOR TEST 1	
	20		
	21		
8 th	22	laced and battened columns including the design of lacing and battens,	
	23	laced and battened columns including the design of lacing and battens,	
	24	Design of eccentrically loaded compression members.	
9 th	25	Column Bases and Footings: Introduction, types of column bases,	
	26	Design of slab base and gusseted base - specifications	
	27	Design of gusseted base subjected to eccentrically loading	
10 th	28	Design of grillage foundations	
	29	Design of grillage foundations	
	30	Design of Beams: Introduction, types of sections, general design criteria for beams,	
11 th	31	design of laterally supported and unsupported beams,	
	32	design of laterally supported and unsupported beams,	
	33	design of built up beams,	
12 th	34	Web buckling, web crippling and diagonal buckling.	
	35	Gantry Girders: Introduction, various loads, Design of gantry girder.	
	36	Design of gantry girder.	
13 th	37	Plate Girder: Introduction, elements of plate girder, design steps of a plate girder	
	38	necessity of stiffeners in plate girder, various types of stiffeners	
	39	web and flange splices (brief introduction)	
14 th	40	MINOR TEST II	
	41		
	42		
15 th	43	Curtailed of flange plates, design beam to column connections	
	44	design beam to column connections	
	45	Introduction, design of framed and seat connection.	