PC/CE/10-T **Design of Steel Structures - I**

Lesson Plan			
Week	**Theory**		
	Lecture Day	**Topic (Including Assignment Test)**	**Date**
1st	1	**Introduction:** Properties of structural steel	
	2	I.S. Rolled sections and I.S. specification	
	3	**Connections:** Importance, various types of connections,	
2nd	4	Simple and moment resistant, riveted connections.	
	5	Bolted connections.	
	6	Bolted connections.	
3rd	7	Welded connections.	
	8	Welded connections.	
	9	**Design of Tension Members:** Introduction, types of tension members,	
4th	10	net sectional areas,	
	11	design of tension members,	
	12	design of tension members,	
5th	13	lug angles	
	14	Splices	
	15	**Design of Compression Members:** Introduction, effective length and slenderness ratio,	
6th	16	various types of sections used for columns, built up columns, necessity,	
	17	design of built up columns,	
	18	design of built up columns,	
7th	19	**MINOR TEST 1**	
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8th	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.	
9th	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	
10th	28	Design of grillage foundations	
	29	Design of grillage foundations	
	30	**Design of Beams:** Introduction, types of sections, general design criteria for beams,	
11th	31	design of laterally supported and unsupported beams,	
	32	design of laterally supported and unsupported beams,	
	33	design of built up beams,	
12th	34	Web buckling, web crippling and diagonal buckling.	
	35	**Gantry Girders:** Introduction, various loads, Design of gantry girder.	
	36	Design of gantry girder.	
13th	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)	
14th	40	**MINOR TEST II**	
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15th	43	Curtailment of flange plates, design beam to column connections	
	44	design beam to column connections	
	45	Introduction, design of framed and seat connection.	