PC/CE/41-T STRUCTURAL ANALYSIS-II

Theory			
Week	**Lecture Day**	**Topic (Including assignment / Test)**	
1st	1	**Statically Indeterminate Structures:** Introduction, Static and Kinematic Indeterminacies	
	2	Castigliano's theorems	
	3	Castigliano's theorems	
	4	Strain energy method	
2nd	5	Analysis of frames with one redundant members using Castigliano's 2nd theorem.	
	6	Analysis of frames with one redundant members using Castigliano's 2nd theorem.	
	7	**Slope deflection Method:** Analysis of continuous beams	
	8	Analysis of continuous beams	
3rd	9	**Slope deflection Method:** portal frames	
	10	Portal Frames	
	11	Portal Frames	
	12	Portal Frames	
4th	13	Portal frames with inclined members.	
	14	Portal frames with inclined members.	
	15	Portal frames with inclined members.	
	16	**Moment Distribution Method:** Analysis of continuous beams	
5th	17	Analysis of continuous beams	
	18	Analysis of continuous beams	
	19	**Moment Distribution Method:** portal frames	
	20	Portal Frames	
6th	21	Portal Frames	
	22	Portal frames with inclined members.	
	23	Portal frames with inclined members.	
	24	Portal frames with inclined members.	
7th			
8th	25	**Column Analogy Method:** Elastic centre	
	26	Properties of analogous column,	
	27	**Column Analogy Method:** Applications to beam	
	28	**Column Analogy Method:** Applications to beam	
9th	29	**Column Analogy Method:** Applications to beam	
	30	**Column Analogy Method:** Applications to frames	
	31	**Column Analogy Method:** Applications to frames	
	32	**Column Analogy Method:** Applications to frames	
10th	33	**Analysis of Two hinged Arches:** Parabolic Arches	
	34	**Analysis of Two hinged Arches:** Parabolic Arches	
	35	**Analysis of Two hinged Arches:** Circular Arches	
	36	**Analysis of Two hinged Arches:** Circular Arches	
11th	37	**Analysis of Two hinged Arches:** Circular Arches	
	38	Bending Moment Diagram for various loadings,	
	39	Bending Moment Diagram for various loadings,	
	40	Temperature effects	
	41	Rib shortening	

12th	42	Axial thrust and Radial Shear force diagrams.	
	43	Axial thrust and Radial Shear force diagrams.	
	44	**Unsymmetrical Bending** Introduction Centroidal principal axes of sections	
13th	45	Bending stresses in beam subjected to unsymmetrical bending	
	46	Bending stresses in beam subjected to unsymmetrical bending	
	47	Shear centre for channel, Angles and Z sections.	
	48	Shear centre for channel, Angles and Z sections.	
14th	**2nd Minor test**		
15th	49	**Cable and suspension Bridges:** Introduction, uniformly loaded cables	
	50	Temperature stresses,	
	51	Three hinged stiffening Girder	
	52	Two hinged stiffening Girder	