Lesson Plan/ Course Break – up

PCC-CVE303-T STRUCTURAL ANALYSIS - II

Name of the Faculty	**:**	Mr. Manik Goyal
Discipline	**:**	B.Tech in Civil Engineering
Semester	**:**	V (3rd Year)
Subject	**:**	Structural Analysis-II
Lesson Plan Duration	**:**	15 Weeks
Work Load (Lecture / Practical) per week (in hrs.)	**:**	Lectures – 03

Week	Theory		
	Lecture Day	Topic (Including assignment / Test)	
1st	1	**Statically Indeterminate Structures :** Introduction	
	2	Static and Kinematic Indeterminacies	
	3	Static and Kinematic Indeterminacies	
2nd	4	Castigliano's theorems	
	5	Castigliano's theorems	
	6	Strain energy method	
3rd	7	Strain energy method	
	8	Analysis of frames with one or two redundant members using Castigliano's 2n theorem.	
	9	Analysis of frames with one or two redundant members using Castigliano's 2n theorem.	
4th	10	**Slope deflection and moment Distribution Methods**	
	11	**Slope deflection and moment Distribution Methods**	
	12	Analysis of continuous beams & portal frames	
5th	13	Analysis of continuous beams & portal frames	
	14	Portalframes with inclined members.	
	15	**Column Analogy Method:** Elastic centre	
6th	16	Properties of analogous column	
	17	Applications to beam & frames	
	18	**Analysis of Two hinged Arches: :**Parabolic and circular Arches	
7th	**1st Minor Test**		
8th	19	**Analysis of Two hinged Arches:** Parabolic and circular Arches	
	20	Bending Moment Diagram for various loadings	
	21	Temperature effects, Rib shortening	
	22	Axial thrust and Radial Shear force diagrams.	

9th	23	**Unsymmetrical Bending**: Introduction	
	24	Centroidal principal axes of sections	
10th	25	Bending stresses in beam subjected tounsymmetrical bending	
	26	Bending stresses in beam subjected tounsymmetrical bending	
	27	Shear centre, shear centre for channel	
11th	28	Angles and Z sections.	
	29	Angles and Z sections.	
	30	**Cable and suspension Bridges**: Introduction	
12th	31	**Cable and suspension Bridges**: Introduction	
	32	Uniformly loaded cables	
	33	Uniformly loaded cables	
13th	34	Temperature stresses	
	35	Temperature stresses	
	36	Three hingedstiffening Girder	
14th	**2nd Minor test**		
15th	37	Three hingedstiffening Girder	
	38	Two hinged stiffening Girder**.**	
	39	Two hinged stiffening Girder**.**	