Lesson Plan/ Course Break – up

PEC-CVE 456-T- DESIGN OF CONCRETE STRUCTERES-II

Name of the Faculty	Mr. Manik Goyal
Discipline	B.Tech in Civil Engineering
Semester	VIII (4th Year)
Subject	Design of Concrete Structures-II
Lesson Plan Duration	15 Weeks (from Feb to May 2024)
Work Load (Lecture / Practical) per week (in hrs.)	Lectures – 03

Week	Theory	
	Lecture	Topic (Including assignment / Test)
1st	1	**Continuous Beams:** Basic assumptions, Moment of inertia, settlements.
	2	Modification of moments, maximum moments and shear.
	3	Modification of moments, maximum moments and shear.
2nd	4	Redistribution of moments for single span beam. Design examples.
	5	Redistribution of moments for single span beam. Design examples.
	6	Redistribution of moments for single span beam. Design examples.
3rd	7	Redistribution of moments for multi-span beams, design examples.
	8	Redistribution of moments for multi-span beams, design examples.
	9	Redistribution of moments for multi-span beams, design examples.
4th	10	**Stair- Cases:** Type of stair-cases,
	11	Effective span of stairs, Distribution of loads on different types of stair cases,
	12	Effective span of stairs, Distribution of loads on different types of stair cases, Design examples.
5th	13	Effective span of stairs, Distribution of loads on different types of stair cases,
	14	**Water Tanks:** Estimation of Wind and earthquake forces,
	15	Design requirements, rectangular and cylindrical underground,
6th	16	Design requirements, rectangular and cylindrical underground,
	17	Design requirements, rectangular and cylindrical underground,
	18	lntze tanks, design considerations, design examples.
7th	**Minor Test-I**	
8th	19	**Design of curved beams in plan:** Analysis of curved beams fixed at both ends
	20	**Design of curved beams in plan:** Analysis of curved beams fixed at both ends

	21	**Design of curved beams in plan:** Design of curved beams fixed at both ends, ring beams
9th	22	**Design of curved beams in plan:** Design of curved beams fixed at both ends, ring beams
	23	**Design of curved beams in plan:** Design of curved beams fixed at both ends, ring beams
	24	**Design of curved beams in plan:** Design of curved beams fixed at both ends, ring beams
10th	25	**Design of Domes:** Meridional and hoop stress in spherical and conical domes.
	26	**Design of Domes:** Meridional and hoop stress in spherical and conical domes.
	27	**Design of Domes:** Meridional and hoop stress in spherical and conical domes.
11th	28	**Retaining walls:** Design of cantilever and counter fort type retaining walls.
	29	**Retaining walls:** Design of cantilever and counter fort type retaining walls.
	30	**Retaining walls:** Design of cantilever and counter fort type retaining walls.
12th	31	**Retaining walls:** Design of cantilever and counter fort type retaining walls.
	32	**Retaining walls:** Design of cantilever and counter fort type retaining walls.
	33	**Introduction to Bridge Engineering:** Definition, components of a bridge, classifications
13th	34	**Introduction to Bridge Engineering:** Definition, components of a bridge, classifications
	35	Importance of bridges. Need for investigations
	36	Selection of bridge site
14th	**Minor Test-II**	
15th	37	I.R.C. loadings.
	38	I.R.C. loadings.
	39	I.R.C. loadings.