PARALA MAHARAJA ENGINEERING COLLEGE, BERHAMPUR

LESSON PLAN

Semester: 4TH SEM **Session-** Even

Subject(PCI4I103)-DESIGN OF CONCRETE STRUCTURES(3-0-1)

Branch/Course: Civil Engineering/B.Tech

Name of faculty:LAREN SATPATHY

Lecture No	Module	Topics to be delivered	Remarks/Sign of Faculty Member
1	1	Introduction to concrete and properties of concrete.	
2	1	Properties of concrete and reinforcement concept and methods of reinforced concrete design.	
3	1	Properties of concrete and reinforcement concept andmethods of reinforced concrete design (Contin...)	
4	1	Introduction to limit state method	
5	1	Introduction to limit state method(Contin...)	
6	1	Limit state of collapse	
7	1	Limit state of serviceability	
8	1	Limit state of serviceability(Contin…)	
9	1	Application of limit state method to rectangular beams for flexure	
10	1	Application of limit state method to rectangular beams for shear, bond and Torsion.	
11	2	Design of doubly reinforced beams	
12	2	Design of doubly reinforced beams(Contin…)	
13	2	Design of doubly reinforced beams(Contin…)	
14	2	Design of T and L beams	
15	2	Design of T and L beams(Contin…)	
16	2	Design of T and L beams(Contin…)	
17	2	Design of one way slabs	
18	2	Design of two way slabs	
19	2	Design of staircases	
20	2	Design of staircases(Contin…)	
21	3	Design of short columns with axial loadings	

22	3	Design of short columns with axial loadings(Contin…)	
23	3	Design of short columns with eccentric loadings	
24	3	Design of short columns with eccentric loadings(Contin…)	
25	3	Design of isolated footings.	
26	3	Design of combined footings	
27	4	Retaining walls, various forces acting on retaining wall.	
28	4	Stability requirement and design of cantilever and counter fort retaining walls.	
29	4	Stability requirement of counter fort retaining walls.	
30	4	Design of water tanks	
31	4	design requirements, design of tanks on ground water tanks.	
32	4	design requirements, design of tanks on Elevated water tanks.	

Signature of Faculty Member Counter Signature of HOD

COURSE OUTCOMES:

Course Outcome	Descriptions (Upon successful completion of the course, students will be able to)
CO1	Define the principals involved in analysis and design of reinforced concrete structures.
CO2	Analyze flexure and shear strength of beams.
CO3	Design Reinforced Concrete structures like Beams, slabs, Columns, Frames, footings, staircase etc.
CO4	Analyze various forces acting on retaining wall.
CO5	Design different types of water tanks.
CO6	Apply the code of practice for design of reinforced concrete structural members and elementary structural systems to ensure safety and serviceability of structural elements.