

Dr. Ambedkar Institute of Technology
Department of Civil Engineering, Bangalore 56.

Lesson Planning for ODD Semester 2016 - 2017
Design of RCC Structural Elements.


Sub. Code: CV52
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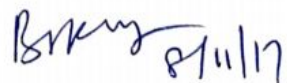
Credits: 04
 SEE: 100 Marks

Name of the Staff: Dr.S.Vijaya
Designation: Professor.

Day	PORTIONS TO BE COVERED	No. of Hours
	UNIT – I	
01/08/2016	GENERAL FEATURES OF REINFORCED CONCRETE: Introduction, design loads, materials for reinforced Concrete and Code requirements.	01
02/08/2016	Design Philosophy – Limit State Design principles. Factor of Safety, Characteristic and design loads, Characteristic and design strength. General aspects of Ultimate strength,	01
03/08/2016	Stress block parameters for limit state of collapse, Ultimate flexural strength of singly reinforced rectangular sections.	01
06/08/2016	Ultimate flexural strength of doubly reinforced rectangular sections. Ultimate flexural strength of flanged sections.	01
09/08/2016	Ultimate shear strength of RC sections, Ultimate torsional strength of RC sections	01
10/08/2016	Concepts of development length and anchorage.	01
11/08/2016	Analysis examples of singly reinforced, doubly reinforced, flanged sections,	01
13/08/2016	Problems	01
16/08/2016	shear strength and development length. General Specification for flexure design of beams.	01
17/08/2016	Problems	01
18/08/2016	Practical requirements, size of beam, cover to reinforcement-spacing of bars. General aspects of serviceability. Deflection limits in IS	01
20/08/2016	Problems	01 12 Hrs.
	UNIT – II	
23/08/2016	DESIGN OF BEAMS: Design procedures for critical sections for moment and shears.	01
24/08/2016	Anchorage of bars, Check for development length. Reinforcement requirements, Slenderness limits for beams to ensure lateral stability.	01
25/08/2016	Design examples for simply supported	01
26/08/2016	Problems	01
27/08/2016	Problems	01
30/08/2016	Problems	01
31/08/2016	Flanged sections	01
01/09/2016	Problems	01
02/09/2016	Problems	01
03/09/2016	Problems	01
06/09/2016	Problems	01

		12 hrs
	UNIT III	
07/09/2016	DESIGN OF SLABS: General considerations of design of slabs	01
08/09/2016	rectangular slabs spanning one direction.	01
10/09/2016	Rectangular slabs spanning in two directions for various boundary conditions.	01
14/09/2016	Design of simply supported slabs	01
15/09/2016	Design of Slabs	01
17/09/2016	Design of Slabs	01
20/09/2016	Design of Slabs	01
21/09/2016	Design of Slabs	01
22/09/2016	Design of Slabs	01
24/09/2016	Design of Slabs	01
		10 hrs
	Unit IV	
27/09/2016	DESIGN OF COLUMNS: General aspects, effective length of column	01
28/09/2016	loads on columns, slenderness ratio for columns, minimum eccentricity	01
01/10/2016	Design of short axially loaded columns	01
04/10/2016	column subjected to combined axial load	01
05/10/2016	uniaxial moment and biaxial moment	01
06/10/2016	Design of footings: Introduction, load for footing,	01
08/10/2016	Design basis for limit state method, Design of isolated rectangular footing for axial load	01
13/10/2016	Design of pedestal	01
15/10/2016	Problems	01
		09 hrs
	Unit V	
18/10/2016	DESIGN OF STAIR CASES: General features, types of stair case	01
19/10/2016	loads on stair cases, effective span as per IS,	01
20/10/2016	distribution of loading on stairs	01
22/10/2016	Design of stair cases, with waist slabs.	01
25/10/2017	Problems	01
26/10/2017	Problems	01
27/10/2017	Calculation of deflection (Theoretical method) & Cracking in structural concrete members , Calculation of deflections and crack width.	01
28/10/2017	Problems	01
29/10/2017	Problems	01
		09 hrs


 Signature of the
 Staff in charge


 Head of the Department.
 Professor and Head
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