

Lesson Plan & Work-done Diary for AY: 2025-26, ODD Semester

Course with Code: Prestressed Concrete – BCV703						Faculty Name: Puneeth K	Semester: 7 th	
Class No.	Date planned (DD/MM)	Topics to be covered	TLP Planned	Class No.	Date of Conduction (DD/MM)	Topics Covered	TLP Executed	Remarks if any deviation
MODULE-1								
1		Introduction to Syllabus	PPT					
2		Concepts of Prestressing	PPT					
3		Historical development of prestressing	PPT					
4		Design Codes for Prestressed Structures	PPT					
5		Design Codes for Prestressed Structures	PPT					
6		Advantages & Limitations of Pre-stressed Concrete Material	PPT					
7		Need for High Strength Concrete- High Tension Steel	PPT					
8		Types of Prestressing Steel	PPT					

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MODULE-2								
9		Theory: Losses- Immediate losses due to Friction and wobble, Elastic shortening Anchorage Slip	PPT					
10		Numerical Problems on losses due to Immediate losses	Chalk and board					
11		Numerical Problems on losses due to Immediate losses	Chalk and board					
12		Numerical Problems on losses due to Immediate losses	Chalk and board					
13		Theory: Time dependent losses due to Creep, Shrinkage and Relaxation losses	PPT					
14		Numerical Problems on losses due to Time dependent losses	Chalk and board					
15		Numerical Problems on losses due to Time dependent losses	Chalk and board					
16		Numerical Problems on losses due to Time dependent losses	Chalk and board					
17		Introduction to Pre-stressing systems	PPT					
18		Pre -Tensioning Devices – Post -Tensioning Devices - Anchorage Devices	PPT					
19		Mechanical pre-stressing - Chemical Pre-stressing - Electrical Pre-stressing	PPT					

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MODULE-3								
20		Combined Load Approach - Internal Couple Approach - Load Balancing Approach	PPT					
21		Steel Stress in Bonded and Un-bonded tendons	PPT					
22		Design as per IS 1343: Flexure and Shear	Chalk and board					
23		Design as per IS 1343: Flexure and Shear	Chalk and board					
24		Design as per IS 1343: Crack & Deflection	Chalk and board					
25		Design as per IS 1343: Crack & Deflection	Chalk and board					
26		Design of Anchorage zone – End block	Chalk and board					
27		Design of Anchorage zone – End block	Chalk and board					
28		Cable Profiling for different beams	PPT					
29		Mechanism of Transfer of Prestress in Pre-Tensioning System and Post Tensioned system	PPT					
30		Mechanism of Transfer of Prestress in Pre-Tensioning System and Post Tensioned system	PPT					

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MODULE-4								
31		Introduction to Circular Prestressing & Types - Design of Prestressed Concrete Pipes	PPT					
32		Design of Prestressed Concrete Pipes	Chalk and board					
33		Pre-stressing in Buildings – Beams	Chalk and board					
34		Pre-stressing in Buildings – Beams	Chalk and board					
35		Pre-stressing in Buildings – One-way Slabs	Chalk and board					
36		Pre-stressing in Buildings – Two-way Slabs	Chalk and board					
37		Pre-stressing in Buildings - Tanks	Chalk and board					
38		Pre-stressing in Buildings - Poles	Chalk and board					
39		Pre-stressing in Buildings - Piles	Chalk and board					
40		Partial Prestress - behavior, advantages and disadvantages, Concepts of Prestressing	PPT					

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MODULE-5								
41		Introduction to Composite Construction	PPT					
42		Analysis-IRC 112	Chalk and board					
43		Analysis-IRC 112	Chalk and board					
44		Codal provisions for ULS and SLS	PPT					
45		Codal provisions for ULS and SLS	PPT					
46		Design of a I-girder with cast in situ slab -Viaducts	Chalk and board					
47		Design of a I-girder with cast in situ slab -Viaducts	Chalk and board					
48		Design of a I-girder with cast in situ slab -Viaducts	Chalk and board					
49		Balanced cantilever bridges	PPT					
50		Railway sleepers	PPT					

Extra Classes: 28/10, 29/10, 30/10, 03/11, 04/11, 06/11, 10/11, 10/11, 11/11, 12/11, 13/11, 17/11, 17/11, 18/11, 19/11, 20/11

	Activity	Planned	Actual	Remarks
1	Theory Classes	50		
2	Assignments/ Quizzes/ Self-study	3A/5Q		
3	Tutorials/ Extra classes	-		
4	Internal Assessments	3		
5	ICT based Teaching (% of usage in Curriculum)	52		
Planning			Execution	
Faculty Signature:			Faculty Signature:	
HoD Signature:			HoD Signature:	