000415

PRN:		Course Code :	P68PE103

First Year **M. Tech** (Civil-Structural Engineering) End Semester Examination Winter 2024

Repair of Concrete Structures

Day and Date: Fri 6 DEC 2024 Max Marks: **50**

Time : 10:30AM To 12:30PM Duration: **02** hrs

Instructions:
1. All questions are compulsory.
2. Assume suitable data wherever necessary and mention it clearly.

			Marks	Bloom's Level	CO
Q.1		**Attempt following Questions**			
	a)	Explain the need of visual inspection of deteriorated structures.	03	1	1
	b)	Discuss the importance of cover thickness in concrete structures.	03	1	1
	c)	Explain: Autogenous healing process.	04	1	1
Q.2		**Attempt the following Question**			
	a)	Elaborate in detail, on the causes of deterioration of concrete structures.	10	3	1
		OR			
	b)	Explain the mechanism of corrosion in detail. Also, explain the causes of corrosion.	10	3	2
Q.3		**Attempt the following Question**			
	a)	Explain the Rebound hammer test as a non-destructive test in concrete.	10	3	3
		OR			
	a)	Discuss semi-destructive tests for strength estimation of concretes.	10	3	3
Q.4		**Attempt the following Question**			
	a)	Discuss various materials used for concrete structures repair.	10	3	4
		OR			
	a)	Explain the mechanism of self-compacting concrete.	10	3	4
Q.5		**Attempt the following Question**			
	a)	Discuss the factors for the selection of material for repairs of concrete structures.	10	3	4
		OR			
	a)	Discuss various types of protective surface coatings.	10	3	4

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