Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-VIII • EXAMINATION – SUMMER 2013** 

Su	bject	Code: 180607 Date: 09-05-2013	
Ti	me: 1	Name: Repairs and Rehabilitation of Structures 0.30 am - 01.00 pm Total Marks: 70	
Ins	tructio 1. 2. 3.	Attempt all questions.  Make suitable assumptions wherever necessary.	
Q.1	(a) (b)	What are the construction errors occurs during concrete construction.  Describe factors influencing corrosion of steel in concrete.	07 07
Q.2	(a) (b)	What is mean by jacketing? Explain different type of jacketing.  Describe the various remedial measures and their relative efficiency against corrosion of steel in RC structure.	07 07
	(b)	OR What are the main objectives of condition assessment of structure?	07
Q.3	(a) (b)	Briefly Explain different demolition technique.  List various non destructive tests for assessment of strength of concrete. Explain rebound hammer test.	07 07
Q.3	(a) (b)	OR What are the essential parameters for good repair material? Explain concrete repairing by grouting.	07 07
Q.4	(a) (b)	Define thermal properties of concrete (i) Thermal conductivity (ii) Thermal diffusivity (iii) Specific heat (iii) Co-efficient of thermal expansion.  Explain in brief factors affecting on permeability of concrete.	07 07
	(0)	OR	07
Q.4	(a) (b)	Explain in brief various mortar used for repairing of concrete structures. Explain shoring and underpinning technique for foundation rehabilitation.	07 07
Q.5	(a)	Discuss stages for repair of concrete slab where the carbonation depth reached reinforcement level.	07
	<b>(b)</b>	Write short note Sulphar infiltrated concrete.  OR	07
Q.5	(a)	How can sulphate attack controlled in concrete?	07
_	(b)	write short note on polymer concrete.	07

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