Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – II • EXAMINATION – SUMMER • 2014

Subject code: 1721506 **Date: 23-06-2014**

Subject Name: Rehabilitation and Retrofitting of Buildings

Time: 02:30 pm - 05:00 pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Draw the necessary neat and clean figures with the pencil only.**

Q.1	**(a)**	Explain how the strengthening of earthquake damaged buildings is carried out?	**07**
	(b)	Explain the push over analysis.	**07**
Q.2	**(a)**	What are the roles of quality control in construction as preventive measures?	**07**
	(b)	Differentiate the following terms. (i) Active Repair and Passive Repair (ii) Strengthening and retrofitting (iii) Repair and Rehabilitation	**07**
		OR	
	(b)	Elaborate the method of Repair and its importance depending upon situation.	**07**
Q.3	**(a)**	Explain how the corrosion assessment in reinforcement in RCC elements is to be carried out?	**07**
	(b)	Write on ñNon destructive testing of connections in steelò.	**07**
		OR	
Q.3	**(a)**	Explain how the corrosion assessment in reinforcement in Steel elements is to be carried out?	**07**
	(b)	Explain in detail Rebar locator and SASW method.	**07**
Q.4	**(a)**	Explain stress reduction method in detail.	**07**
	(b)	Explain the survey procedure and assessment of structural conditions in RCC structures.	**07**
		OR	
Q.4	**(a)**	Explain the effect of abrasion, erosion and cavitations on RCC structures.	**07**
	(b)	Explain the survey procedure and assessment of structural conditions in steel structures.	**07**
Q.5	**(a)**	Explain Cathodic protection detail.	**07**
	(b)	Explain the effect of weather on durability of concrete. Explain Alkali-silica reaction.	**07**
		OR	
Q.5	**(a)**	Explain on durability of concrete. Elaborate the factors affecting the durability of concrete.	**07**
	(b)	What is rapid visual screening? Explain in detail.	**07**

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