Seat I	Vo.: _	Enrolment No	
		GUJARAT TECHNOLOGICAL UNIVERSITY	
		M. E SEMESTER – II • EXAMINATION – WINTER • 2014	
J			
_		Name: Rehabilitation and Retrofitting of Buildings	
		:30 pm - 05:00 pm Total Marks: 70	
Instr		Attempt all questions.	
		Make suitable assumptions wherever necessary.	
		Figures to the right indicate full marks.	
Q.1	(a)	What is Durability? What precautions should be taken to maintain durability of structure?	07
	(b)	Explain how Corrosion of reinforcements in concrete occurs?	07
Q.2	(a)	Explain types of structural cracks in Reinforced Concrete Structures. Also explain How to identify them during site investigation.	07
	(b)	What are the roles of quality control in construction as preventive measures? OR	07
	(b)	Explain following terms only a) Freeze thaw effects b) Abrasion and Cavitation c) Weathering & Efflorescence	07
Q.3	(a)	Enlist the various objectives of Conditional Survey & explain the Structural Inspection in detail.	07
	(b)	What are the various sources of defects in brick masonry structures? Explain each source in detail.	07
		OR	^-
Q.3	(a)	Explain the survey procedure and assessment of structural conditions in RCC structures.	07
	(b)	Explain any two Non-Destructive tests carried out for the assessment of concrete strength in detail.	07
Q.4	(a)	Discuss any one real structural failure in detail along with lessons learnt.	07
	(b)	What is rapid visual screening? Explain in detail. OR	07
Q.4	(a)	Explain strengthening of earthquake damaged building.	07
	(b)	Explain in detail Rebar locator and SASW method.	07
Q.5	(a)	Enlist repair materials available in the market for building maintenance. Discuss any one maintenance problem in detail.	07
	(b)	Discuss various schemes of retrofitting column for different types of structural	07

Write Short note on Selection of repair material & repair strategy
Discuss various schemes of retrofitting beam for different types of structural

OR

deficiency.

deficiency.

Q.5

(a)

(b)

07

07