Seat No.:	Enrolment No.

Subject Code:2732004

GUJARAT TECHNOLOGICAL UNIVERSITY

ME – SEMESTER III (NEW) – EXAMINATION – SUMMER 2017

Date:02/05/2017

Subject Name: Rehabilitation and Retrofitting of Structures				
	me: 0 tructio	22:30 pm to 05:00 pm Total Marks:	70	
	1. 2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.		
Q.1	(a) (b)	What are the causes of distress/deterioration of Structures. Define Condition Assessment of Structures. Explain in detail the various stages of the same.	07 07	
Q.2	(a) (b)	Explain the term durability of Concrete. What are the factors affecting durability of concrete. Explain how corrosion of steel occurs in concrete.	07 07	
	(b)	OR	07	
	(b)	Explain deterioration of concrete due to Sulphate attack.	07	
Q.3	(a)	Explain any two Non destructive tests carried out for the assessment of concrete strength in detail.	07	
	(b)	Explain briefly the Structural and Non Structural cracks in buildings. Support your description with examples for each type. OR	07	
Q.3	(a)	Explain the various causes of Structural cracks in Reinforced Concrete Structures. How can you identify different types of cracks during on site investigation.	07	
	(b)	Discuss any real Structural failure in detail along with lesson learnt.	07	
Q.4	(a)	Discuss various schemes of retrofitting of RCC Column for different types of Structural deficiency.	07	
	(b)	Enlist different properties required of repair material. OR	07	
Q.4	(a)	Differentiate between the following (any two) I. Repair/Rehabilitation II. Strengthening/Retrofitting III. Porosity/Permeability	07	
	(b)	Describe the various Retrofitting schemes for RCC beams for different types of Structural deficiency.	07	
Q.5	(a)	What are the various sources of defects or flaws found in Steel Structure? How would you assess or evaluate these defects.	07	
	(b)	Explain any two repair techniques	07	
Q.5	(a) (b)	OR Discuss different materials for crack repair What is Shoring? Enlist different types of Shores	07 07	
