

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VIII (NEW) EXAMINATION – SUMMER 2021****Subject Code:2180607****Date:04/08/2021****Subject Name:Repairs & Rehabilitation Of Concrete Structures****Time:02:30 PM TO 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.

		MARKS
Q.1	(a) Discuss the effect of Alkaline silica reaction on concrete.	03
	(b) Explain NDT Hammer Test and its limitations	04
	(c) Described the mechanism of micro-crack due to differential thermal	07
Q.2	(a) Explain the Factor affecting on the durability of concrete	03
	(b) List various construction and design deficiency.	04
	(c) Write a short note on the Damage assessment and its various methods for evaluation.	07
OR		
	(c) What are the objectives of condition survey? In explain the various stage of condition survey.	07
Q.3	(a) Write short note on thermal conductivity, specific heat and thermal diffusivity.	03
	(b) Explain the process of durable concrete repair.	04
	(c) Write Requirement as per IS : 456 for Durability of RCC Structure	07
OR		
Q.3	(a) List various construction and design deficiency	03
	(b) Write short note on Plate Bonding technique.	04
	(c) What is meant by carbonation of concrete? How it is determined in concrete	07
Q.4	(a) What are the need for retrofitting in RCC	03
	(b) Write a short note on polymer concrete	04
	(c) Enlist different crack repair techniques. Explain any three in detail.	07
OR		
Q.4	(a) Enlist various causes of damage in Masonry buildings.	03
	(b) Write short note on Ferro Cement.	04
	(c) What are Role of quality control in construction and how to take Preventive measures Maintenance of buildings?	07
Q.5	(a) Discuss Temperature effect on concrete.	03
	(b) What kind of Deficiencies requiring in structure for seismic retrofit.	04
	(c) What is meant by jacketing? Explain different types of Jacketing	07
OR		
Q.5	(a) Explain long term health monitoring of structures.	03
	(b) List of utility service to be discontinue before demolition	04
	(c) How corrosion occurs in RCC Structures. Discuss various corrosion mitigation techniques	07

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