

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE- SEMESTER-VIII (OLD) EXAMINATION – WINTER 2020****Subject Code:180607****Date:28/01/2021****Subject Name:Repairs & Rehabilitation Of Structures****Time:02:00 PM TO 04:00 PM****Total Marks: 56****Instructions:**

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) List out various technique for crack repair. Explain grouting in detail **07**  
(b) Write short note on Foamed Concrete **07**
- Q.2** (a) How the field and laboratory testing are useful for damage assessment of structures? **07**  
(b) Enlist the Non destructive test for structures and explain the “Ultra sonic pulse velocity test” in detail. **07**
- Q.3** (a) If the main reinforcement and shear reinforcement of a beam are corrode and needs to be replaced by new bars, what are the basic steps involve in this procedure. **07**  
(b) Discuss the long term health monitoring techniques. **07**
- Q.4** (a) Differentiate between retrofitting and rehabilitation of structure **07**  
(b) Explain the mechanism of the following corrosion protection methods. **07**  
(i) corrosion inhibitors (ii) Cathodic protection.
- Q.5** (a) State causes and precautions for distress in structures. **07**  
(b) Explain briefly the purpose and procedure for the damage assessment **07**
- Q.6** (a) Explain the polymer impregnated concrete with its application. **07**  
(b) Explain Guniting and Shotcrete as method of repair. **07**
- Q.7** (a) What is meant by jacketing? Discuss repair and strengthening of columns by jacketing. **07**  
(b) Classify the Repair materials based on types of application. **07**
- Q.8** (a) Write short note on Foundation Rehabilitation Methods. **07**  
(b) Explain preparation done before to start demolition **07**

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