

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.

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| 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.
(i) corrosion inhibitors (ii) Cathodic protection. | 07 |
| 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 |
