

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VIII • EXAMINATION – SUMMER 2014****Subject Code: 180607****Date: 27-05-2014****Subject Name: Repairs and Rehabilitation of Structures****Time: 10.30 am - 01.00 pm****Total Marks: 70****Instructions:**

1. Attempt all 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) Explain in short procedure for damage assessment in structural elements. **07**
- Q.2** (a) Explain preparation done before to start demolition. **07**  
(b) Which machines used for demolition of structure. Describe them with example. **07**
- OR**
- (b) Which are physical and chemical causes of distress considering construction deficiency? Explain in detail. **07**
- Q.3** (a) What is carbonation? What are the factors affecting it? **07**  
(b) Write short note on chloride attack on concrete. **07**
- OR**
- Q.3** (a) Explain need of concrete cover in R.C.C. structure. Give IS 456:2000 recommendations for nominal cover. **07**  
(b) Explain alkali aggregate reaction. What are the factors promoting it and how it can be controlled? **07**
- Q.4** (a) How corrosion occurs in steel? Explain in detail various coating to prevent corrosion. **07**  
(b) Enlist various types of polymer concrete. Explain Polymer Concrete. **07**
- OR**
- Q.4** (a) List out various Non-Destructive Test (NDT) used to determine strength of existing structure. Explain any one of them. **07**  
(b) Explain stepwise sequence of operation to prevent leakage from terrace. **07**
- Q.5** (a) Write short note on Foamed Concrete. **07**  
(b) Write short note on Expansive Cement. **07**
- OR**
- Q.5** (a) Write short note on Sulphur Infiltrated Concrete. **07**  
(b) Write short note on Shotcrete. **07**

\*\*\*\*\*