

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VIII (NEW) EXAMINATION – WINTER 2018****Subject Code: 2180607****Date: 19/11/2018****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.

- Q.1** (a) Give various construction errors leads to the cracking and deterioration of concrete. **03**
 (b) Discuss Epoxy as a repair material **04**
 (c) How corrosion occurs in RCC Structures. Discuss various corrosion mitigation techniques? **07**
- Q.2** (a) How we can improve durability of concrete in sea water? **03**
 (b) How corrosion of reinforcement prevent in RCC? **04**
 (c) Explain carbonation in concrete.? How it is determined in concrete. What are the limitation associated with it. **07**
- OR**
- (c) What are the causes of distress in concrete. **07**
- Q.3** (a) How repairing of small crack carried out structures? **03**
 (b) Explain methodology to repair earthquake deficient structure. **04**
 (c) Explain rebound hammer test with neat sketch. **07**
- OR**
- Q.3** (a) Which are the parameters required for selection of repair material. **03**
 (b) Write short note on fiber wrap technique. **04**
 (c) Enlist factors affecting on permeability. Explain in details. **07**
- Q.4** (a) How to carry out repairs of leakage from terrace?. **03**
 (b) Explain crack due to overloading with sketch. **04**
 (c) What do u mean by jacating ? Explain column jacating with neat sketch. **07**
- OR**
- Q.4** (a) Distinguish between Rea=hilitation and Retrofitting. **03**
 (b) EWhat are the facors affecting on pulse velocity measurement. **04**
 (c) Write short note on vacuum concrete and ferorcement **07**
- Q.5** (a) What is durability ? Enlist factors affecting on durability **03**
 (b) Write short note on temperature effect on concrete. **04**
 (c) Explain alkali silica reaction in details. **07**
- OR**
- Q.5** (a) Give advantage of utilize Portland slag cement. Where it used? **03**
 (b) Write short note in visual inspection to asses fire damaged structures. **04**
 (c) Write short note on effect freezing and thawing. **07**
