

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VIII • EXAMINATION – SUMMER 2013****Subject Code: 180607****Date: 09-05-2013****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) What are the construction errors occurs during concrete construction. **07**
(b) Describe factors influencing corrosion of steel in concrete. **07**
- Q.2** (a) What is mean by jacketing? Explain different type of jacketing. **07**
(b) Describe the various remedial measures and their relative efficiency against corrosion of steel in RC structure. **07**
- OR**
- (b) What are the main objectives of condition assessment of structure? **07**
- Q.3** (a) Briefly Explain different demolition technique. **07**
(b) List various non destructive tests for assessment of strength of concrete. Explain rebound hammer test. **07**
- OR**
- Q.3** (a) What are the essential parameters for good repair material? **07**
(b) Explain concrete repairing by grouting. **07**
- Q.4** (a) Define thermal properties of concrete (i) Thermal conductivity (ii) Thermal diffusivity (iii) Specific heat (iii) Co-efficient of thermal expansion. **07**
(b) Explain in brief factors affecting on permeability of concrete. **07**
- OR**
- Q.4** (a) Explain in brief various mortar used for repairing of concrete structures. **07**
(b) Explain shoring and underpinning technique for foundation rehabilitation. **07**
- Q.5** (a) Discuss stages for repair of concrete slab where the carbonation depth reached reinforcement level. **07**
(b) Write short note Sulphar infiltrated concrete. **07**
- OR**
- Q.5** (a) How can sulphate attack controlled in concrete? **07**
(b) write short note on polymer concrete. **07**
