

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VIII • EXAMINATION – WINTER • 2014****Subject Code: 180607****Date: 25-11-2014****Subject Name: Repairs and Rehabilitation of Structures****Time: 02:30 pm - 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) Explain the causes of distress in structure. **07**
(b) Explain various stages of condition survey. Mention the objectives of condition survey. **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**
- OR**
- (b) What is Half cell potential test? Explain it's use with fig. **07**
- Q.3** (a) Define durability and explain factors affecting durability of structures. **07**
(b) What is corrosion? Explain mechanism by which steel corrodes in concrete. **07**
- OR**
- Q.3** (a) What are the causes of cracks in concrete? Explain in detail. **07**
(b) What is sulphate attack on concrete? Enlist the methods used to control sulphate attack on concrete. **07**
- Q.4** (a) Classify the Repair materials based on types of application. **07**
(b) What is polymer impregnated concrete? Write the application of it. **07**
- OR**
- Q.4** (a) Write short note on : (i) Crack sealing materials (ii) Micro concrete. **07**
(b) What is shore? Enlist different types of shores and explain use of Dead shore with sketch. **07**
- Q.5** (a) Define : Repair, Retrofitting, Rehabilitation, Restoration and explain crack repair technique. **07**
(b) Explain column jacketing and plate bonding with sketch. **07**
- OR**
- Q.5** (a) Describe in brief the various methods / technique of demolition. **07**
(b) Explain the precautions to be taken during demolition of structure. **07**
