

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-III EXAMINATION – WINTER 2015

Subject Code:130605**Date:29/12/2015****Subject Name: Concrete Technology****Time: 2:30pm to 5:00pm****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 compressive strength test on cement. **07**
(b) Explain the sieve analysis test on sand. Explain the effect of fine ness modulus on mix design. **07**
- Q.2** (a) Explain the segregation and bleeding effect on concrete. **07**
(b) What is curing? Explain the various techniques used for curing. **07**
- OR**
- (b) Elaborate on underwater concreting. **07**
- Q.3** (a) Explain the term durability of concrete. Also discuss the major causes of inadequate durability. **07**
(b) Explain the terms: Water to cement ratio, gel space ratio and aggregate cement ratio. **07**
- OR**
- Q.3** (a) Explain the factors affecting the strength of concrete. **07**
(b) State the non-destructive test used for concrete. Explain any one of them. **07**
- Q.4** (a) What is meant by carbonation of concrete? How it is determined in concrete? What are the limitations associated with it? **07**
(b) Elaborate the causes of distress in concrete structures. **07**
- OR**
- Q.4** (a) Explain the assessment procedure for inspection and evaluation of damaged structure. **07**
(b) Write the steps of mix design using IS10262. **07**
- Q.5** (a) What is sulphate attack on concrete? Enlist the methods used to control sulphate attack on concrete. **07**
(b) Classify the Repair materials based on types of application. **07**
- OR**
- Q.5** (a) Write short note on ready mix concrete. **07**
(b) Explain alkali-aggregate reaction. **07**
