

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**PDDC - SEMESTER-IV EXAMINATION – SUMMER 2016**

**Subject Code: X40602**

**Date: 30/05/2016**

**Subject Name: Concrete Technology**

**Time: 10:30 AM TO 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 Define the following terms: Fine aggregate, Coarse aggregate, Grouting, Shotcrete, Concrete 7  
B What precautions are to be taken during mixing and transportation process of concrete? Discuss the adverse effects that occur due to improper mixing or placing. 7
- Q 2 A What do you understand by the term curing of concrete? What is the significance of curing and enlist various techniques of curing of concrete. 7  
B Enlist various chemical attack on concrete. Discuss about sulphate attack and chloride attack in brief. 7
- OR**
- B Write short note on Mass Concrete. 7
- Q3 A Write steps of concrete mix design as per IS method 7  
B Write short note on grading of aggregates. 7
- OR**
- Q 3 A Write short note on durability of concrete. 7  
B Enlist and explain the importance of various Bouge's compounds of cement 7
- Q 4 A Write short note on fibre reinforced concrete. 7  
B In spite of the cellular structure of aggregate, lightweight concretes show less micro cracking and excellent durability. Why? 7
- OR**
- Q 4 A Write short note on admixtures used to increase workability of concrete. 7  
B Non-destructive testing in concrete has a vital part in assessing the quality of concrete . Name the tests that justify the statement. 7
- Q 5 A Explain in brief various factors affecting strength of hardened concrete. 7  
B Enlist various special concreting techniques and explain any one in detail. 7
- OR**
- Q 5 A Enlist the factors that cause distress in structure. Discuss the precautionary and remedial measures. 7  
B What is meant by jacketing? Discuss different methods of jacketing. 7