

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – II • EXAMINATION – SUMMER • 2014

Subject code: 1724906

Date: 23-06-2014

Subject Name: Advances in Concrete Technology

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) Define Cement. And Explain manufacturing process of Cement with flow chart. **07**
(b) Write Short note on Quality Control of Concrete for High rise construction. **07**
- Q.2** (a) Describe the durability and Creep of Concrete. **07**
(b) Give the various tests to perform for Self Compacting concrete and explain any two with sketches. **07**
- OR**
- (b) Define Workability and explain factor affecting workability. **07**
- Q.3** (a) Give the name of various tests for fresh concrete and explain any two in detail with sketches. **07**
(b) What is Pre stress concrete? Explain Pretension and post tension concrete. **07**
- OR**
- Q.3** (a) Explain: - Lightweight Concrete, Fibre Reinforced Concrete. **07**
(b) As a site engineer how would you select the various materials to produce High Workable Concrete? **07**
- Q.4** (a) Explain:- Mass Concrete, Roller compacted concrete **07**
(b) What is Shrinkage? Explain factors affecting Shrinkage. **07**
- OR**
- Q.4** (a) Write short note on utilization of Fly ash concrete in Indian context. **07**
(b) Give the steps for Mix Design as per IS CODE. **07**
- Q.5** (a) Give the process of production of concrete and explain Mixing and Curing of concrete. **07**
(b) What is NDT? Enumerate various Non-Destructive tests and explain any one in details. **07**
- OR**
- Q.5** (a) What is high performance concrete? Give its properties and explain various materials to produce high performance concrete. **07**
(b) Write short note on utilization of Self compacted concrete in Indian context. **07**
