Seat No.:	Enrolment No.

Subject Code:X40602

GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC - SEMESTER-IV EXAMINATION - WINTER 2015

Date:21/12/2015

Subject Name: Concrete Technology Time: 02:30pm to 05:00pm Instructions: 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks.			70
Q.1	(a) (b)	Explain 'Standard Consistency Test' and 'Setting Time Test' for cement. Define admixtures. Enlist various types of admixtures and explain any two.	07 07
Q.2	(a)(b)	Enlist and Explain in brief various factors promoting the alkali-aggregate reaction. What is heat of hydration? Explain contribution of Bogue's compounds to heat of hydration.	07 07
	(b)	OR Explain effect of aggregate-cement ratio and effect of age on concrete strength.	07
Q.3	(a)	Define workability. Enlist and explain in brief factors affecting workability of fresh concrete.	07
	(b)	Enlist and explain the methods adopted for transportation of concrete. OR	07
Q.3	(a) (b)	Define curing. Explain various methods of curing of concrete. What is creep? Explain factors affecting creep.	07 07
Q.4	(a) (b)	Write short note on durability and permeability of concrete. Enlist various destructive & non-destructive tests for hardened concrete. Write procedure of compression test for hardened concrete. OR	07 07
Q.4	(a) (b)	Write short notes on light weight aggregate concrete and no-fines concrete. Write short notes on sulphate attack and acid attack	07 07
Q.5	(a) (b)	Write data required and steps involved in mix design using IS method. Explain various sources of distress in concrete of structural elements. OR	07 07
Q.5	(a)	Write short notes (any two): (i) Shotcrete (ii) Ferrocement (iii) Ready Mixed Concrete	07
	(b)	Write short notes (any two): (i) Rapid Hardening Cement (ii) Quick Setting Cement (iii) Segregation of Concrete	07
