Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER- IV(NEW) EXAMINATION - SUMMER 2015

Subject Code:2140608 Subject Name: Concrete Technology			Date:30/05/2015	
Ti	_	10:30am-1.00pm Total Marks: 7	70	
	1 2	 Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. 		
Q.1	(a)	Fill in the blanks: (i) The cement becomes useless if its absorbed moisture exceeds% (3, 4, 5) (ii) The individual variation in compressive strength results should not exceed of the average. (5%, 15%, 20%). (iii) To prevent segregation, the maximum height for placing concrete is cm. (100, 125,150)	03	
	(b) (c)	Describe the wet process of manufacturing of cement. What is soundness of cement? Explain soundness test of cement.	04 07	
Q.2	(a) (b)	Mention acceptance criteria for Mix design. The following data represents the strength of individual cubes of M25 grade of concrete. 24, 26, 24, 21, 22, 23, 27, 28, 30, 21 N/mm ² . Calculate mean strength, Standard deviation and co-efficient of Variance. State factors affecting Compressive strength of concrete and explain any one in	07	
	(~)	detail.	0.	
	(b)	Define Creep. Explain factors affecting creep of concrete.	07	
Q.3	(a) (b)	Explain causes of Corrosion and Remedial measures.(i) Define Durability. Explain its significance.(ii) Define Shrinkage. Explain Plastic shrinkage.	07 04 03	
		OR		
Q.3	(a) (b)	Explain factors affecting Durability. (i) Explain Sulphate Attack on concrete. (ii) Give advantages of Quality control.	07 04 03	
Q.4	(a) (b)	(i) State the major Compounds of OPC and importance of them.(ii) Write short note on Segregation.Explain "Alkali Aggregate Reaction". Explain factors promoting it.	04 03 07	
	` /	OR		
Q.4	(a)	(i) State any four different types of cement with its use.(ii) Write short note on Bleeding.	04 03	
Q.5	(b) (a)	Explain Aggregate Crushing value test on Coarse Aggregate. Write short note on Self Compacting Concrete.	07 07	
	(b)	Define workability. State different methods of it. Describe any one in detail. OR	07	
Q.5	(a) (b)	(i) Explain Pre-packed Concrete (ii)List out various application of Shotcrete. List various Non-Destructive tests for assessment of strength of concrete. Explain Rebound Hammer test. ***********************************	04 03 07	