Enrollment No:	Exam Seat No:

C.U.SHAH UNIVERSITY

Winter Examination-2019

Subject Name: Concrete Technology

Subject Code: 4TE03CNT1 Branch: B.Tech (Civil)

Semester: 3 Date: 26/11/2019 Time: 02:30 To 05:30 Marks: 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

Q-1		Attempt the following questions:	(14)
Q-1			1
	a)	Mention the laboratory test to find soundness of cement.	
	b)	Define Gap grading.	1
	c)	Mention role of coarse aggregate in concrete.	1
	d)	What is admixture?	1
	e)	Define workability.	1
	f)	Differentiate between volume batching and weigh batching in concrete mixing.	1
	g)	Define creep	1
	h)	What is carbonation?	1
	i)	Distinguish between nominal mix and design mix.	1
	j)	List the main purpose of accelerated curing test.	1
	k)	What are the applications of ultrasonic pulse velocity testing?	1
	1)	Expand NDT.	1
	m)	Differentiate between Ordinary concrete and Special concrete.	1
	n)	What is the modulus of elasticity of concrete?	1
Atten	npt an	y four questions from Q-2 to Q-8	
Q-2		Attempt all questions	(14)
	(a)	Explain the procedure of 'Rebound hammer test' with a neat sketch.	(07)
	(b)	Describe the tests performed on hardened concrete and explain any one in detail.	(07)



Q-3		Attempt all questions	(14)
	(a)	Explain the various steps involved in manufacture of concrete in detail.	(07)
	(b)	Mention the various tests of aggregate and explain any one in detail.	(07)
Q-4		Attempt all questions	(14)
	(a)	Explain the cement manufacturing process with a neat flowchart.	(07)
	(b)	Discuss the different types of cement and also explain any two in detail.	(07)
Q-5		Attempt all questions	(14)
	(a)	Describe the classification of shrinkage in concrete.	(06)
	(b)	Write short note Alkali aggregate reaction.	(04)
	(c)	Enumerate the properties of fresh concrete in detail.	(04)
Q-6		Attempt all questions	(14)
	(a)	Explain the tests available for measurement of workability of concrete in detail.	(06)
	(b)	Explain the usage of super plasticizer in concrete with its advantages.	(04)
	(c)	Write short note on 'Sea water attack' on concrete.	(04)
Q-7		Attempt all questions	(14)
	(a)	Discuss the various methods of controlling sulphate attack.	(06)
	(b)	Explain about the Ferro-cement with its application and advantages.	(04)
	(c)	Write short note on Durability of concrete.	(04)
Q-8		Attempt all questions	(14)
	(a)	Write short notes on vacuum concrete with neat sketch.	(07)
	(b)	Design a mix design for M35 grade of concrete using IS-10262:2009. (Assume	(07)
		suitable data)	

