Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
ME - SEMESTER– II (Old course)• REMEDIAL EXAMINATION – SUMMER 2015

Subject Code: 1721502   **Date:13/05/2015**

Subject Name: Behaviour of Reinforced Concrete

Time: 02:30 pm to 5:00 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)**	Explain the behavior of concrete under uniaxial action.	**07**
	(b)	Enlist the various stress ó strain models for concrete. Elaborate any one of them.	**07**
Q.2	**(a)**	Enlist the theories to analyze slab element. Elaborate any one of them.	**07**
	(b)	Explain short and long term deflections, with the factors affecting it.	**07**
		OR	
	(b)	Explain the mechanism of resistance of bond stress.	**07**
Q.3	**(a)**	Explain the factors affecting bond and the anchorages.	**07**
	(b)	Explain the behavior of RC element under combined effect of torsion and bending.	**07**
		OR	
Q.3	**(a)**	Explain the behavior of RC element under combined effect of shear and torsion.	**07**
	(b)	Elaborate on the resisting mechanism of RC element with shear reinforcement.	**07**
Q.4	**(a)**	Explain on the behavior of deep beam under the effect of shear.	**07**
	(b)	Elaborate the steps of analysis of RC section under compression force with uniaxial moment.	**07**
		OR	
Q.4	**(a)**	Explain moment curvature relationship of Reinforced Concrete element.	**07**
	(b)	The role of web reinforcement in torsion members is similar to that of stirrups in flexural members subject to shear. Justify the statement .State the provisions from the code.	**07**
Q.5	**(a)**	Define Poissonøs ratio, modulus of elasticity, and modulus of rupture and explain their influence on the behavior of reinforced concrete elements.	**07**
	(b)	State the basic assumptions made in the analysis and design of RC elements under flexure. Explain its implications on design.	**07**
		OR	
Q.5	**(a)**	Explain the ductility of unconfined RC sections under flexure.	**07**
	(b)	Elaborate Truss Model for RC element under shear.	**07**

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