Seat No.: _____ *Enrolment No._____*

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. Sem. – II[nd] - Examination – June/July- 2011

Subject code: 1721502

Subject Name: Behaviour of Reinforced Concrete

Date:24/06/2011 **Time: 10:30 am – 01:00 pm**

Total Marks: 70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Draw neat and clean sketches.**

Q.1	**(a)**	Explain limit state design philosophy for reinforced concrete.	**07**
	(b)	Elaborate the various stress – strain models for concrete in short.	**07**
Q.2	**(a)**	Explain the response of RC element under uniaxial and biaxial bending.	**07**
	(b)	Explain moment curvature relationship of RC element under flexure.	**07**
		OR	
	(b)	What are the basic assumptions made for design of RC element under axial force? Explain its implications.	**07**
Q.3	**(a)**	Explain the resisting mechanism of RC elements under shear.	**07**
	(b)	Elaborate Truss Model for RC element under shear.	**07**
		OR	
Q.3	**(a)**	Explain the behaviour of deep beams.	**07**
	(b)	Explain the mechanism of resistance of RC element under torsion.	**07**
Q.4	**(a)**	What are the theories to analyze slab element? Explain any one of them.	**07**
	(b)	Elaborate the term 'Interface shear transfer'.	**07**
		OR	
Q.4	**(a)**	Explain the concept of Yield lines.	**07**
	(b)	Discuss the factors affecting bond and anchorages.	**07**
Q.5	**(a)**	Explain the mechanism of resistance of bond stresses and anchorages.	**07**
	(b)	Explain the method of analysis of RC section under axial force.	**07**
		OR	
Q.5	**(a)**	Explain the concept of ductility of unconfined RC section under flexure.	**07**
	(b)	Explain different types of stress – strain curve for steel.	**07**

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