Seat No.: Enr	olment No
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GUJARAT TECHNOLOGICAL UNIVERSITY

BE- V th SEMESTER-EXAMINATION – MAY/JUNE - 2012				
Subject code: 152203 Date:		ate: 04/062012		
Subject Name: Rock Mechanics				
Time: 02:30 pm – 05:00 pm			otal Marks: 70	
1.	Atte	empt all questions.		
	2. Make suitable assumptions wherever necessary.			
3.	Figu	ares to the right indicate full marks.		
Q.1	(a)	List out different physical and mechanical properties of roc Which factors are responsible for the mechanical properties rock masses? Explain elasticity and plasticity.		
	(b)	Write the notes on Porosity, Density and Moisture content.	07	
Q.2	(a)	What are the problems of Rock mechanics? Explain differ discontinuities and defects in rock masses.	rent 07	
	(b)		tion 07	
	(b)	Write a note on Triaxial compressive strength.	07	
Q.3	(a)	Which factors are important for the planning a piezome installation to measure water pressure in rock masses.	eter 07	
	(b)		omb 07	
Q.3		Write a note on Darcy`s law.	07	
	(b)	Discuss Consolidation in soil.	07	
Q.4	(a)	Explain Creep and its measurement in the rocks.	07	
	(b)	Explain "Rheological models are time – deformation – depend stress models" with the help of Kelvin model.	lent 07	
Q.4	(a)	What is failure in rocks? Write a note on yield criteria of fail theories.	ure 07	
	(b)	Write a note on Griffith`s theory.	07	
Q.5	(a)	Explain In-situ determination of Elastic properties of rocks dynamic method.	by 07	
	(b)	Explain Cable Jacking test.	07	
Q.5	(a) (b)	Explain Static and dynamic modulii of elasticity. Explain Flat jack technique.	07 07	
