Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V • EXAMINATION - WINTER • 2014

	•	Code: 152203 Date: 03-12-2014 Name: Rock Mechanics	
Ti	me: 1 tructio 1. 2.	10:30 pm to 01:00 pm Total Marks: 70	
Q.1	(a) (b)	Define rock mechanics and also describe its application. What is rock? Explain different properties of rock.	07 07
Q.2	(a) (b)	Explain the role of stress and strain in rocks. Differentiate static and dynamic load on rocks. OR	07 07
	(b)	What parameters affect the physical properties of rocks?	07
Q.3	(a) (b)	Explain the stress strain conditions in isotropic and anisotropic rocks. What is hardness? Explain Moh's scale of hardness and role of hardness in rockmass.	07 07
Q.3	(a) (b)	What role does porosity and permeability play in rock strength? What is Slake durability index? Explain the working of Slake durability apparatus with figure.	07 07
Q.4	(a) (b)	Explain the rock deformability under uniaxial compression. What is creep deformation? Explain creep test. OR	07 07
Q.4	(a) (b)	Classify the properties of soil. Evaluate the engineering properties of soil.	07 07
Q.5		Write note on any two: 1. Hrdro-facturing method. 2. Influence of eater on rock. 3. Griffith criteria. 4. Flat Jack Test. 5. Rheology models.	14
