Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE – SEMESTER – V (NEW) EXAMINATION – WINTER 2015

Subject Code: 2152204 **Date:05/12/ 2015**

Subject Name: Rock Mechanics

Time:10:30am to 1:00pm **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)**	What is Rock Mechanics? What are the application of rock mechanics?	**07**
	(b)	Differentiate dynamic and static loading.	**07**
Q.2	**(a)**	Explain the stress and strain developed in rocks and its effect in mining.	**07**
	(b)	How are physical properties of rocks determined?	**07**
		OR	
	(b)	What are the factors that play a major role on determining the strength of rocks?	**07**
Q.3	**(a)**	How is porosity and permeability measured in rocks?	**07**
	(b)	What are the dynamic property of rocks?	**07**
		OR	
Q.3	**(a)**	Explain the relationship between creep deformation and strength behaviour.	**07**
	(b)	How are elastic properties and strength of insitu rocks determined?	**07**
Q.4	**(a)**	Explain the Coulumb's and Mohr's criteria of rock.	**07**
	(b)	What are he pre-mining stress in rock mass.	**07**
Q.4	**(a)**	Explain the classification of engineering soils.	**07**
	(b)	What are the physical properties of soil?	**07**
Q.5	**(a)**	Write short note on Soil compressibility.	**07**
	(b)	Write short note on Water influence on rock mass.	**07**
		OR	
Q.5	**(a)**	Write short note on Slake durability.	**07**
	(b)	Write short note on Consolidation and compaction of Soil.	**07**

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