Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- VIIth SEMESTER–EXAMINATION – MAY/JUNE- 2012

Subject code: 172205 **Date: 29/05/2012**

Subject Name: Rock slope engineering

Time: 02:30 pm – 05:00 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)**	Give the different principles of rock slope engineering. Explain any one.	**07**
	(b)	What are the design parameters used for planning an investigation programme.	**07**
Q.2	**(a)**	Explain the ground water flow in unstable slope design of rocks.	**07**
	(b)	Explain back analysis of slope failures	**07**
		OR	
	(b)	Give Hoek – brown strength criteria for rockmasses.	**07**
Q.3	**(a)**	What is plane failure? Explain plane failure analysis.	**07**
	(b)	Explain reinforcement with fully grouted untensioned dowels.	**07**
		OR	
Q.3	**(a)**	Explain pseudo – static stability analysis.	**07**
	(b)	Explain wedge failure analysis including cohesion, friction and water pressure.	**07**
Q.4	**(a)**	Explain circular analysis with suitable examples.	**07**
	(b)	Explain importance of explosive properties and blast hole diameter for blasting in sloppy area.	**07**
		OR	
Q.4	**(a)**	Write a note on Bishop`s and janbu`s method for slices.	**07**
	(b)	What is blast damage? Give the controlling measures for it.	**07**
Q.5	**(a)**	Give the different methods for stabilization by rock removal.	**07**
	(b)	Explain regressive and progressive movements of rock slope.	**07**
		OR	
Q.5	**(a)**	Explain geological investigation programme for porphyry deposits.	**07**
	(b)	Explain surface monitoring methods for rock slope.	**07**

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