Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VII (OLD) - EXAMINATION – SUMMER 2017

Subject Code: 172205 **Date: 29/04/2017**

Subject Name: Rock Slope Engineering (Department Elective - I)

Time: 02:30 PM to 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)**	What is circular failure? Explain circular failure charts.	**07**
	(b)	Explain sub-surface monitoring methods for rock slope.	**07**
Q.2	**(a)**	What is Wedge failure? Explain comprehensive wedge analysis.	**07**
	(b)	What is plan failure in rock slope? Describe analysis of failure on a rough plane.	**07**
		OR	
	(b)	What is blasting? Write a short note on damage from ground vibrations by blasting.	**07**
Q.3	**(a)**	What is Rock? Write a short note on geological data collection.	**07**
	(b)	What is Rock slope engineering? Explain the history of rock slope engineering.	**07**
		OR	
Q.3	**(a)**	Explain ground water in rock slope.	**07**
	(b)	What do you mean by role of explosive? Add a note on production blasting.	**07**
Q.4	**(a)**	Which geological parameter is used for the rock slope engineering?	**07**
	(b)	Write a short note on rock slope engineering.	**07**
		OR	
Q.4	**(a)**	Explain geological investigation programme for mineral deposits.	**07**
	(b)	What is blast damage? Give the controlling measures for it.	**07**
Q.5	**(a)**	Explain static load and resistance factor in design for rock slopes.	**07**
	(b)	Explain the Hoek-brown strength criteria for rock masses.	**07**
		OR	
Q.5	**(a)**	Explain the affect of ground water flow in unstable slope design of rocks.	**07**
	(b)	Explain reinforcement with fully grouted untensioned dowels.	**07**

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