Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VII(OLD) • EXAMINATION – WINTER 2016

Subject Code: 172205 Date: 18/11/2016

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

Time: 10:30 AM to 01:00 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 blast damage? The name of controlling measures for it.	**07**
	(b)	Explain sub-surface monitoring methods for rock slope.	**07**
Q.2	**(a)**	Explain geophysical method for the site reconnaissance for mining method.	**07**
	(b)	Explain importance of explosive properties and blast hole diameter for blasting in sloppy area.	**07**
		OR	
	(b)	Write a short note on slope stability.	**07**
Q.3	**(a)**	What is circular failure? Explain circular failure charts.	**07**
	(b)	Describe Hoek-brown strength criteria for rock mass.	**07**
		OR	
Q.3	**(a)**	What do you mean by role of explosive? Add a note on production blasting.	**07**
	(b)	What is plane failure? Explain plane failure analysis.	**07**
Q.4	**(a)**	What is rock slope engineering? Explain various modern techniques in mine.	**07**
	(b)	Which geological parameters are used for the rock slope engineering?	**07**
		OR	
Q.4	**(a)**	Explain the various effects of ground water flow.	**07**
	(b)	Write a short note on regressive and progressive methods.	**07**
Q.5	**(a)**	Explain load and resistance factor in design for rock slopes.	**07**
	(b)	Write a note on use of non-linear failure criterion in Bishop stability analysis.	**07**
		OR	
Q.5	**(a)**	Write a short note on geological data collection.	**07**
	(b)	Why seismic method is carried out for the site reconnaissance for different rock cuts? Explain it in brief.	**07**

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