

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-VII EXAMINATION – WINTER 2015**

**Subject Code: 172205**

**Date: 04/12/2015**

**Subject Name: Rock Slope Engineering**

**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) Write a short note on damage from ground vibrations by blasting. **07**  
(b) Define production blasting. Write precautions to improve the slope stability with production blasting. **07**
- Q.2** (a) Write a short note on back analysis of slope failure. **07**  
(b) Explain comprehensive wedge analysis. **07**
- OR**
- (b) Write a short note on geological data collection. **07**
- Q.3** (a) List out different principles of rock slope engineering. Explain one of them. **07**  
(b) Describe back analysis of slope failures. **07**
- OR**
- Q.3** (a) Describe plane failure. Explain analysis of plane failure. **07**  
(b) Explain surface monitoring methods of rock slope. **07**
- Q.4** (a) Explain pseudo-static stability analysis. **07**  
(b) Explain the various effects of ground water flow. **07**
- OR**
- Q.4** (a) Describe Bishops and Jamun's method for slices. **07**  
(b) Give Hoek-brown strength criteria for rock masses. **07**
- Q.5** (a) Describe importance of explosive properties for blasting in sloppy area. **07**  
(b) Describe various sub-surface monitoring methods for rock slope movements. **07**
- OR**
- Q.5** (a) Write a short note on regressive and progressive methods. **07**  
(b) Explain circular failure analysis. **07**

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