

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**
