

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**
