

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VII • EXAMINATION – WINTER • 2014****Subject Code: 172207****Date: 29-11-2014****Subject Name: Rock Fragmentation****Time: 10:30 am - 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 drilling? Describe the types of drilling methods. **07**  
(b) Show how drilling methods of mineral production from surface mines are different from underground mines. **07**
- Q.2** (a) What are the different types of machines used in drilling? **07**  
(b) Differentiate percussive and rotary drilling. **07**
- OR**
- (b) What parameters are important in drilling? **07**
- Q.3** (a) How monitoring of blasting is carried out? **07**  
(b) Write a note on drill-ability of rocks. **07**
- OR**
- Q.3** (a) Describe the situational use of high explosives and low explosives **07**  
(b) Explain the properties of explosives? **07**
- Q.4** (a) What equipments are used in monitoring of blasting? Explain its role also. **07**  
(b) What safety measures are to be observed while using explosives? **07**
- OR**
- Q.4** (a) Differentiate electric and non-electric blasting. **07**  
(b) Explain various computational models of blasting. **07**
- Q.5** Write note on any two : **14**
1. Detonators.
  2. Vibration due to blasting.
  3. Novel methods of drilling.
  4. Role of reinforcement in blasting.
  5. Blasting design.

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