

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

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

# GUJARAT TECHNOLOGICAL UNIVERSITY

B.E. Sem-V<sup>th</sup> Examination December 2010

Subject code: 152202

Subject Name: Surface Mine Production

Date: 15/12/2010

Time: 03.00 pm - 05.30 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) List out the factors consider in depth during the selection f opencast mining. 07  
(b) Give the layout of bench and explain the terms Bench, Bench height, Bench width, Face angle, Cut, Berm and catch bench. 07
- Q.2 (a) Explain overcastting by Dragline with its various methods. 07  
(b) Write a note on Height and Width of the bench. 07
- OR**
- (b) Describe the merit and limitations open pit mining. 07
- Q.3 (a) List out the factors which affect drill performance. 07  
(b) Explain: twin bench blasting and secondary blasting 07
- OR**
- Q.3 (a) List out criteria for selection of drill. 07  
(b) Write down the parameter with equation for designing the blasting pattern. 07
- Q.4 (a) List out the factors for Selection of excavators 07  
(b) Point out the Comparison between diesel shovel and electric shovel. 07
- OR**
- Q.4 (a) Give the points to deploy a dragline in the surface mining. 07  
(b) Describe the applicability, merit and demerits of surface continuous mine. 07
- Q.5 (a) List out the transporting system which are used in opencast mining and describe the pipeline transportation system. 07  
(b) Define the Slope failure with its various types. 07
- OR**
- Q.5 (a) List out types of reclaimer for reclaiming the material and explain bucket wheel reclaimer with it's a neat sketch. 07  
(b) Give the machinery used in ground preparation and explain any two. 07

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