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10MN751

Seventh Semester B.E. Degree Examination, June / July 2014
Advance Surface Mining

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.

PART – A

- 1 a. Explain the role of cut – off grade and its importance for the estimation of ore resource. (10 Marks)
b. Explain various methods of quality control of one in open pit mines. (10 Marks)
- 2 a. Explain briefly the factors that influence the number and direction of the benches. (10 Marks)
b. Explain briefly, how to calculate the number and length of benches. Assure your own conditions. (10 Marks)
- 3 Draw a layout for a mechanized surface mine for a flat deposit. Assume your own conditions. (20 Marks)
- 4 Write short notes with appropriate sketches :
a. Plane.
b. Wedge.
c. Circular.
d. Toppling. (20 Marks)

PART – B

- 5 a. Explain factors affecting the stability of a slope and explain various circular failure charts. (10 Marks)
b. Calculate the FOS for plane and wedge failure in dry condition. (10 Marks)
- 6 a. Explain continuous surface mine. With a neat sketch give its advantages and disadvantages. (10 Marks)
b. Explain the selection of drilling in a large open cast mines with respect to Dragline. (10 Marks)
- 7 a. Explain in brief the safety aspects in open cast mines regarding height, width and slope of the benches. (10 Marks)
b. What are the causes and preventive measures of fly rocks in open cast mines? (10 Marks)
- 8 a. What are the important aspects in designing the haul roads for a large open cast mining? (10 Marks)
b. Explain the importance of site selection and design of spoil dumps. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.