

# B.E. 3<sup>rd</sup> Semester Examinations 2011

## MN 301 Introduction to Mining

Full Marks: 70

Time: 3 hours

### 1<sup>st</sup> Half

**Answer Question No. 1 and any two from the rest**

1. Write short notes on:

a) Burn Cut b) Slurry explosives c) Sub-grade drilling d) Controlled Blasting e) Wireline drilling  
(3+3+2+3+4)

2. Explain the formation of crater for a blast-hole with respect to its position within the bench. Explain with sketch what you mean by direct and reverse initiation.  
(5+5)

3. What are the guidelines to be adopted for blasting on a cut face? Draw a sketch of wedge cut  
(5+5)

4. a) Explain various patterns of blast holes and delay patterns used in large opencast bench blasting. Explain the system of blasting with deck charging.  
(5+5)

### 2<sup>ND</sup> HALF

**Answer question No.6 and any two from the rest.**

6. a) Write down the laboratory method of proximate analysis  
b) Write down the coal quality parameters  
c) Discuss on the coal combustion products and byproducts.  
(5+3+7)

7. a) Classify minerals with example according to their functional group.  
b) Explain different properties of mineral with example.  
(5+5)

8. a) State the theories of origin of coal.  
c) What are the different bands present in coal?  
(6+4)

9. a) State the different types of exploration.  
b) What information is sought through geological exploration?  
(2+8)

10. a) Write down the steps of prospecting procedure  
b) Define caking index and enumerate its significance.  
c) Classify non coking coal  
(4+3+3)