



10MN63

**Sixth Semester B.E. Degree Examination, June/July 2019**  
**Underground Metal Mining**

Time: 3 hrs.

Max. Marks:100

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

**PART – A**

- 1 a. What are the scope and limitation of U/G metal mining? (10 Marks)  
b. Explain the peculiarities of metaliferous mine deposit. (10 Marks)
- 2 a. What are the factors affecting the choice of level interfaces? (10 Marks)  
b. What is the uniqueness of underground access? (10 Marks)
- 3 a. Explain the classification of stoping. (10 Marks)  
b. Explain the factors to be considered for choice of stoping methods in the metal mine. (10 Marks)
- 4 a. What are the various supported class of mining methods? (03 Marks)  
b. Explain with neat sketch, the cut and fill method of stoping with Conditions , Application, Advantages and disadvantages. (17 Marks)

**PART – B**

- 5 Explain with neat sketch, the sub level stoping with their applicability , advantages and disadvantages. (20 Marks)
- 6 a. What is the procedure involved in the extraction of shaft pillars? (10 Marks)  
b. What is the special precautions to be taken during extraction of pillars? (10 Marks)
- 7 a. What are the problems associated with deep mining? (10 Marks)  
b. What are the stoping methods in deep mining? Explain any one. (10 Marks)
- 8 Explain the Tunnel boring machine and Shaft boring machines and their application. (20 Marks)

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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.