

# CBCS Scheme

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15MN63

Sixth Semester B.E. Degree Examination, June/July 2018

## Underground Metal Mining

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing one full question from each module.

### Module-1

- 1 a. Explain scope and limitations of underground metal mining in Indian Mining Industry. (08 Marks)  
b. Explain with neat sketch, of shaft station, Raise, Winze and Cross cut. (08 Marks)

OR

- 2 a. Explain arrangements for dumping into main ore pass, with neat sketch. (08 Marks)  
b. What are the factors to be considered choosing a level interval? (08 Marks)

### Module-2

- 3 a. Draw a flow chart classifying the different methods of stoping. (06 Marks)  
b. Explain the applicability, merits and demerits of sub – level stoping with a well labeled neat sketch. (10 Marks)

OR

- 4 a. What are the factors affecting the choice of stoping method? (06 Marks)  
b. Explain with neat sketch, vertical retreat method with their applicability, advantages and disadvantages. (10 Marks)

### Module-3

- 5 a. Explain the applicability, stope preparation with well labeled neat sketch of Post and Pillar Stopping Method. (08 Marks)  
b. Explain cut and fill stoping method with their application, merits, demerits and well labeled neat sketch. (08 Marks)

OR

- 6 Explain the sub – level caving with their stope preparation, application, merits and demerits with well labeled neat sketch. (16 Marks)

### Module-4

- 7 Explain the operation of block caving with well labeled neat sketch. (16 Marks)

OR

- 8 Explain with neat sketch, top slicing and their applicability, stope preparation, merits and demerits. (16 Marks)

### Module-5

- 9 a. Explain Solution Mining, with neat sketch. (08 Marks)  
b. Explain the phenomena of Insitu leaching, with a neat diagram. (08 Marks)

OR

- 10 a. Explain Bore – hole mining, with neat sketch. (08 Marks)  
b. Explain the problem of Deep mining and suggest methods to resolve those problems. (08 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.