



--	--	--	--	--	--	--	--	--	--

10MN63

Sixth Semester B.E. Degree Examination, Jan./Feb.2021
Underground Metal Mining

Time: 3 hrs.

Max. Marks:100

Note: Answer FIVE full questions, selecting at least TWO questions from each part.

PART – A

- 1 Explain the peculiarities of metallic ferrous deposits with their scope limitations of underground metal mines. (20 Marks)
- 2 Write short notes on:
 - a. Level intervals.
 - b. Short station.
 - c. Cross cut.
 - d. Raise and Winze. (20 Marks)
- 3
 - a. Explain the factors which affect the choice of stoping method. (10 Marks)
 - b. Give the classification of stoping methods. (05 Marks)
 - c. Describe the Physio-Mechanical characteristics of ore and wall rocks. (05 Marks)
- 4
 - a. Explain the shrinkage stoping, with a neat sketch. (10 Marks)
 - b. Explain the cut and fill stoping, with a neat sketch. (10 Marks)

PART – B

- 5
 - a. Explain the sub level stoping with their application, limitation, merits and demerits. (10 Marks)
 - b. Explain the long hole stoping. (10 Marks)
- 6
 - a. What are the precautions to be taken before and after the extraction of shaft pillars? (10 Marks)
 - b. Explain the method of shaft pillar extraction in weak ground with required sketch. (10 Marks)
- 7 Explain the problem associated with Deep mining and special stoping method available for extraction of minerals in Deep mining. (20 Marks)
- 8
 - a. Explain shaft Boring Machine, with neat sketch. (10 Marks)
 - b. List out the merits and demerits of shaft boring machine. (05 Marks)
 - c. List out the applications of Tunnel boring machine. (05 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.