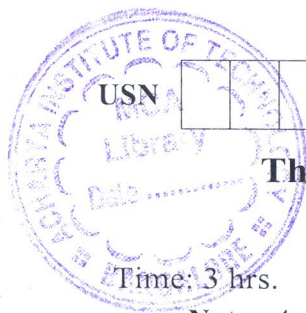


CBCS SCHEME



USN

18MN32

Third Semester B.E. Degree Examination, Jan./Feb. 2023 Elements of Mining Engineering

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Explain the stages in mine its cycles. (10 Marks)
- b. Explain the significances contribution of mining industry for national economy. (10 Marks)

OR

- 2 a. Explain the important selection criteria for an underground mines. (10 Marks)
- b. Describe the important geotechnical investigation for an underground coal mines. (10 Marks)

Module-2

- 3 a. Explain the unit operation involved in shaft sinking process. (10 Marks)
- b. Describe the important geo technical investigation for an shaft sinking project. (10 Marks)

OR

- 4 a. Explain a special method of sinking a shaft when loose sand (or) alluvial soil is encountered with a neat sketch. (10 Marks)
- b. Explain any one method for deepening the crushing operating shaft. (10 Marks)

Module-3

- 5 a. Explain the construction of draft with a burn cut pattern of blasting. (10 Marks)
- b. Explain the alimark raise climber. (10 Marks)

OR

- 6 a. Explain the method of driving an cross cut with a wedge cut pattern of blasting. (10 Marks)
- b. Illustrate with a neat sketch of conventional method of raising with two compartment method. (10 Marks)

Module-4

- 7 a. Explain the method of roof stitching. (10 Marks)
- b. Explain the method of roof bolting. (10 Marks)

OR

- 8 a. Explain the method of arch support. (10 Marks)
- b. Explain the grouting method of supporting. (10 Marks)

Module-5

- 9 a. Explain the conventional method of driving tunnel. (10 Marks)
- b. Explain the method of transporting blasted material to the surface. (10 Marks)

OR

- 10 Explain the tunnel boring machine with their advantages, disadvantages, conditions and limitations. (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.