



CBCS SCHEME

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17MN35

Third Semester B.E. Degree Examination, Jan./Feb. 2021 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 importance of mining to development of national economy. (10 Marks)
b. Explain the method of opening with Adit. (10 Marks)

OR

- 2 a. Explain the stages in mine life cycle. (10 Marks)
b. Explain the geotechnical investigation in formation to be considered for an underground mines. (10 Marks)

Module-2

- 3 a. Explain the different surfaces arrangements for shaft sinking project. (10 Marks)
b. Explain the unit operation involved for a 6m ϕ shaft sinking project. (10 Marks)

OR

- 4 a. Explain the piling method of shaft sinking. (10 Marks)
b. Explain the method of deepening of existing shaft. (10 Marks)

Module-3

- 5 a. Explain the method of driving a drift of 4 \times 4m c/s with burn cut pattern. (10 Marks)
b. Explain the arrangement of ventilation, lighting and drainage system for drift of 4 \times 4m c/s area. (10 Marks)

OR

- 6 a. Explain the method of driving a cross cut with a dimension of 4 \times 4m c/s area with wedge cut pattern. (10 Marks)
b. Explain the method of transporting blasted material to the surface. (10 Marks)

Module-4

- 7 a. Explain the prop support with a neat sketch. (10 Marks)
b. Explain the hydraulic support with a neat sketch. (10 Marks)

OR

- 8 a. Explain the Fore poling with a neat sketch. (10 Marks)
b. Explain the Roof bolts with a neat sketch. (10 Marks)

Module-5

- 9 a. Explain briefly the Tunnel boring machine. (10 Marks)
b. Explain the blasting during adverse rock condition. (10 Marks)

OR

- 10 a. Explain briefly the shield tunnel boring machines. (10 Marks)
b. Explain the principle of rock cutting with disc cutters. (10 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.