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15MN35

Third Semester B.E. Degree Examination, June/July 2017
Elements of Mining Engineering

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. Write a detailed note on the Mining industry in National economy. (08 Marks)
 b. Explain the basic terminologies. (08 Marks)

OR

- 2 a. Write detailed note on shape and size of the drive and also explain the factors influencing the shape and size of the drive. (08 Marks)
 b. Surface arrangement of shaft sinking. (08 Marks)

Module-2

- 3 a. Explain about the surface plant and equipment for shaft sinking. (08 Marks)
 b. Explain temporary and permanent liming in the shaft. (08 Marks)

OR

- 4 a. With a neat sketch, explain the drop raise method. (08 Marks)
 b. Explain the widening the shaft sinking. (08 Marks)

Module-3

- 5 a. With a neat sketch, explain the raising with 2-compartment method. (08 Marks)
 b. Explain the ventilation system in drive. (08 Marks)

OR

- 6 Write short note on the following
 a. Ventilation (08 Marks)
 b. Lighting (08 Marks)

Module-4

- 7 a. With a neat sketch, explain the Cog support. (08 Marks)
 b. Explain types of support in underground mine. (08 Marks)

OR

- 8 a. With a neat sketch, explain the roof stitching. (08 Marks)
 b. Explain different rock Bolting. (08 Marks)

Module-5

- 9 a. With a neat sketch, explain the construction and working principle of tunnel boring machine. (08 Marks)
 b. Explain with neat sketch shaft Boring in underground mine. (08 Marks)

OR

- 10 a. With a neat sketch, explain the construction and working principle of shield tunneling method. (08Marks)
 b. Explaining the use of tunneling system at surface. (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.