

CBCS Scheme

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15MN35

Third Semester B.E. Degree Examination, Dec.2017/Jan.2018 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 basic Geo-Technical investigation for mining. (10 Marks)
b. Explain the different classification of mining methods. (06 Marks)

OR

- 2 a. Write note on selection of shaft for underground mining, type, size and location details. (10 Marks)
b. Write in detail on shaft location for deep seated mineral deposit by underground mining. (06 Marks)

Module-2

- 3 a. Write in detail the method of shaft sinking in loose and running soil area. (10 Marks)
b. Write the method of shaft sinking in highly water logged area. (06 Marks)

OR

- 4 a. Write notes on different methods for widening and deepening of an existing shaft. (10 Marks)
b. Write the man power and equipments needed for widening and deepening of shaft. (06 Marks)

Module-3

- 5 a. Write note on Drivage of Crosscuts from shaft to reach axe body by conventional methods. (10 Marks)
b. Write note on the arrangements of ventilation for a long drive in a large mine. (06 Marks)

OR

- 6 a. Write notes on drivage of Raise by mechanized method. (10 Marks)
b. Show the drilling pattern for underground hard rock. (06 Marks)

Module-4

- 7 a. Explain the different types of supports in mine working. (10 Marks)
b. Write note on hydraulic supports in long drives. (06 Marks)

OR

- 8 a. Write note on Roof – stiches as mine supports in Wad ways. (10 Marks)
b. Write note on Roof bolting as support in underground mine. (06 Marks)

Module-5

- 9 a. Write note on conventional method of Drilling in underground hard work mines. (10 Marks)
b. Write the applicability of Tunneling by Tunnel Boring machine. (06 Marks)

OR

- 10 a. Write different type of Transportation of muck in underground by conventional method. (10 Marks)
b. Write the advantages and limitations of Tunnel Boring machine. (06 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.