



CBCS SCHEME

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18MN52

Fifth Semester B.E. Degree Examination, Jan./Feb. 2021 Underground Coal Mining

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 current status of coal reserves in India. (10 Marks)
b. With a neat sketch, explain Opening up a coal seam by vertical shaft. (10 Marks)

OR

- 2 a. With a neat sketch, explain the basic underground Coal Mining methods. (10 Marks)
b. Discuss the parameters influencing the division of mine into blocks. (10 Marks)

Module-2

- 3 a. Discuss the different methods of developments adopted in Bord and Pillar mining and explain Blasting off the solid. (10 Marks)
b. With a neat sketch, explain the panel system of mining in Bord and Pillar system. (10 Marks)

OR

- 4 a. Explain with a neat sketch, Room and Pillar method of mining. (10 Marks)
b. Explain the Sequence and Manner of extraction of pillars in Bord and Pillar Mining system. (10 Marks)

Module-3

- 5 a. Explain the parameters governing long wall mining. (10 Marks)
b. Explain the advantages and disadvantages of long wall retreating over long wall advancing. (10 Marks)

OR

- 6 a. With a neat sketch, explain long wall mining by using single unit long wall face system. (10 Marks)
b. Explain the factors affecting length and width of long wall panel. (10 Marks)

Module-4

- 7 a. With neat sketches, explain the strata mechanics around the long wall panel. (14 Marks)
b. Explain the applicability, merits and demerits of long wall mining. (06 Marks)

OR

- 8 a. Explain with a neat sketch, method of working a thick coal seam by long wall mining. (10 Marks)
b. Explain the factors affecting length and width of long wall panel. (10 Marks)

Module-5

- 9 a. With a neat sketch, explain Sublevel Caving and discuss its applicability, advantages and disadvantages. (15 Marks)
b. Discuss the applicability of Hydraulic mining. (05 Marks)

OR

- 10 a. Explain the process of Underground Coal gasification. (10 Marks)
b. Explain with a neat sketch, Blasting Gallery method of Mining thick coal seam. (10 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.