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18MN822

Eighth Semester B.E. Degree Examination, June/July 2024

Dimensional Stone 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 key geological factors influencing the occurrence and classification of dimension stones. (10 Marks)
- b. Discuss the different techniques employed in dimensional stone mining. (10 Marks)

OR

- 2 a. What are the chemical and geological properties that influence the quality of dimensional stones? (10 Marks)
- b. Define Dimensional stone and provide a brief overview of their historical use. (10 Marks)

Module-2

- 3 a. What are the key cutting / saving tools used in dimensional stone processing? (10 Marks)
- b. What are the different techniques used in mechanized mining for dimensional stones? (10 Marks)

OR

- 4 a. Explain any one mechanized mining process in dimensional stone extraction. (10 Marks)
- b. Explain how line drilling can be employed for dimensional stone mining. (10 Marks)

Module-3

- 5 a. Explain the role of Derrick Crane in handling blocks and slabs in a quarrying operation. (10 Marks)
- b. Discuss the various inherent defects that control productivity. (10 Marks)

OR

- 6 a. Compare the use of front end loaders and forklifts in the handling of blocks and slabs. (10 Marks)
- b. With a neat sketch, explain the Construction and working principle of Crane. (10 Marks)

Module-4

- 7 As a Mining Engineer , suggest some of the common methods used for the proper disposal of Solid waste with its advantages and limitations. (20 Marks)

OR

- 8 a. Discuss the health risks associated with abrasive dust exposure and measure to prevent it. (10 Marks)
- b. Explain the importance of managing slurry waste in quarrying and mining operation. (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.

Module-5

- 9 a. What are the various techniques involved in processing and polishing dimensional stone? (10 Marks)
- b. Explain how are dimensional stones fixed and installed in different applications such as flooring and cladding. (10 Marks)

OR

- 10 a. Explain the key considerations for the care and maintenance of dimensional stones post – installation. (10 Marks)
- b. Discuss why is it important to use appropriate fixing and installation techniques for dimensional stones. (10 Marks)

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