

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

## GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2023

Subject Code:3172214

Date:19-12-2023

Subject Name: Dimensional Stone Technology

Time: 10:30 AM TO 01:00 PM

Total Marks:70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

MARKS

- |            |     |   |           |
|------------|-----|---|-----------|
| <b>Q.1</b> | (a) | Explain the resources of dimensional stones in India.                                   | <b>03</b> |
|            | (b) | What do you mean by dimensional stones? Explain its uses and application.               | <b>04</b> |
|            | (c) | What do you mean by prospecting & Exploration? Discuss any one method of it.            | <b>07</b> |
| <b>Q.2</b> | (a) | Name the factors affecting the quality and exploitability of a dimension stone deposit. | <b>03</b> |
|            | (b) | Write a procedure for obtaining mining lease.   | <b>04</b> |
|            | (c) | Write short note on the following with a neat sketch ( <b>ANY TWO</b> ):                | <b>07</b> |
|            | a)  | Derrick Crane   |           |
|            | b)  | Front Loader  |           |
|            | c)  | Hydraulic Jacks   |           |
|            |     | <b>OR</b>   |           |
|            | (c) | Explain the following terms:  | <b>07</b> |
|            | a)  | Gang saw  |           |
|            | b)  | Chain saw   |           |
| <b>Q.3</b> | (a) | Name the machineries used for processing of dimensional stones.                         | <b>03</b> |
|            | (b) | Write a note on slab mining.  | <b>04</b> |
|            | (c) | Write a brief note on granite and its mining method.                                    | <b>07</b> |
|            |     | <b>OR</b>   |           |
| <b>Q.3</b> | (a) | What are the Physico-mechanical properties of slate?                                    | <b>03</b> |
|            | (b) | Discuss the strategies of dimensional stone mining.                                     | <b>04</b> |
|            | (c) | Write a brief note on marble and its mining method.                                     | <b>07</b> |
| <b>Q.4</b> | (a) | Name the places or areas of limestone deposit in India.                                 | <b>03</b> |
|            | (b) | What do you mean by block mining?   | <b>04</b> |
|            | (c) | How in-situ sawing is done by diamond wire saw? Explain briefly with neat sketch.       | <b>07</b> |
|            |     | <b>OR</b>   |           |
| <b>Q.4</b> | (a) | What do you mean by diamond segments?   | <b>03</b> |
|            | (b) | Explain the processing of dimensional stone with flow chart.                            | <b>04</b> |
|            | (c) | What do you understand by line drilling and jet flame cutting technique?                | <b>07</b> |
| <b>Q.5</b> | (a) | Explain the secondary use of quarried land and waste of the industry.                   | <b>03</b> |
|            | (b) | Discuss the major health risk in dimensional stone mining and processing.               | <b>04</b> |
|            | (c) | Describe the geology and geographical distribution of granite in India.                 | <b>07</b> |
|            |     | <b>OR</b>   |           |
| <b>Q.5</b> | (a) | What are the Global Scenario of Granite Consumption?                                    | <b>03</b> |
|            | (b) | Write the export procedure of dimensional stone.  | <b>04</b> |
|            | (c) | Discuss the environmental impact of mining and processing of dimensional stones.        | <b>07</b> |

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