

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

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

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-IV(NEW) – EXAMINATION – SUMMER 2019****Subject Code:2142203****Date:20/05/2019****Subject Name: Geology-II****Time:02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

**MARKS**

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|------------|---|-----------|
| <b>Q.1</b> | (a) Describe general characteristics of igneous, sedimentary and metamorphic rocks.       | <b>03</b> |
|            | (b) What is earthquake? Explain waves of earthquakes.                                     | <b>04</b> |
|            | (c) Define engineering geology. Explain how petrology is important in mining engineering. | <b>07</b> |
| <b>Q.2</b> | (a) What are igneous intrusions?  | <b>03</b> |
|            | (b) Describe the intensity of an earthquake.  | <b>04</b> |
|            | (c) Give the tabular classification of Igneous rocks.                                     | <b>07</b> |
|            | <b>OR</b>   |           |
|            | (c) Explain the characteristics of Granite, Sandstone and Schist.                         | <b>07</b> |
| <b>Q.3</b> | (a) How are sedimentary rocks formed?   | <b>03</b> |
|            | (b) Give the classification of sedimentary rocks on the basis of their origin.            | <b>04</b> |
|            | (c) Describe different types of sills with neat sketches.                                 | <b>07</b> |
|            | <b>OR</b>   |           |
| <b>Q.3</b> | (a) Explain in short equigranular textures of igneous rocks.                              | <b>03</b> |
|            | (b) Explain agents of metamorphic rocks.  | <b>04</b> |
|            | (c) Explain different texture of sedimentary rocks.                                       | <b>07</b> |
| <b>Q.4</b> | (a) Describe the following rocks: (i) Basalt (ii) Marble.                                 | <b>03</b> |
|            | (b) Differentiate mountains on the basis of genesis.                                      | <b>04</b> |
|            | (c) What is joint? Explain the type of joints.  | <b>07</b> |
|            | <b>OR</b>   |           |
| <b>Q.4</b> | (a) Describe the intensity of an earthquake.  | <b>03</b> |
|            | (b) Describe the structure of metamorphic rocks.  | <b>04</b> |
|            | (c) Write Note on: Lineation and schistosity  | <b>07</b> |
| <b>Q.5</b> | (a) What are the reasons of landslides?   | <b>03</b> |
|            | (b) What are various geological factors affecting a tunnel site?                          | <b>04</b> |
|            | (c) What is volcano? Explain types of volcanoes.  | <b>07</b> |
|            | <b>OR</b>   |           |
| <b>Q.5</b> | (a) Write Note on : Siwalik Supergroup.   | <b>03</b> |
|            | (b) Seismic zones of India.   | <b>04</b> |
|            | (c) What investigation is to be carried out at a dam site?                                | <b>07</b> |

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