

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-III (New) EXAMINATION – WINTER 2018****Subject Code: 2132203****Date: 12/12/2018****Subject Name: Geology-I****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.

|            |   | MARKS     |
|------------|---|-----------|
| <b>Q.1</b> | (a) Define the mineral. Explain the physical properties of minerals.                      | <b>03</b> |
|            | (b) What is geology? Explain the various importance of geology in mining engineering.     | <b>04</b> |
|            | (c) What are the plate tectonics? Write a note on plate boundary.                         | <b>07</b> |
| <b>Q.2</b> | (a) Explain the difference between Dip and Strike.  | <b>03</b> |
|            | (b) Write a short note on river meandering.   | <b>04</b> |
|            | (c) Describe the internal structure of earth with a neat diagram.                         | <b>07</b> |
|            | <b>OR</b>   |           |
|            | (c) Describe physical properties of magnetite, iron ore, tourmaline and gypsum.           | <b>07</b> |
| <b>Q.3</b> | (a) Define the terms: Mineral, Rock and Gangue.   | <b>03</b> |
|            | (b) Write a short note on upper vindhyas system.  | <b>04</b> |
|            | (c) What is fault? Explain normal and reverse faults.                                     | <b>07</b> |
|            | <b>OR</b>   |           |
| <b>Q.3</b> | (a) Describe: earth as a planet in solar system.  | <b>03</b> |
|            | (b) What are the different branches of geology? Describe any four.                        | <b>04</b> |
|            | (c) What is an unconformity? Describe angular unconformity.                               | <b>07</b> |
| <b>Q.4</b> | (a) What are the advantages and limitations of drilling?                                  | <b>03</b> |
|            | (b) Explain erosion features developed by wind.   | <b>04</b> |
|            | (c) What is Weathering? Explain various physical and mechanical properties of Weathering. | <b>07</b> |
|            | <b>OR</b>   |           |
| <b>Q.4</b> | (a) Explain symmetrical and asymmetrical folds.   | <b>03</b> |
|            | (b) Explain Feldspar Group of minerals.   | <b>04</b> |
|            | (c) Explain a typical fold terminology with neat diagram.                                 | <b>07</b> |
| <b>Q.5</b> | (a) What are the basic principles of stratigraphy?  | <b>03</b> |
|            | (b) Explain mohorovichic, Gutenberg discontinuity.  | <b>04</b> |
|            | (c) Write a short note on Glacier deposits.   | <b>07</b> |
|            | <b>OR</b>   |           |
| <b>Q.5</b> | (a) Define following terms: (1) Erosion (2) Denudation.                                   | <b>03</b> |
|            | (b) Write physical properties of Quartz mineral.  | <b>04</b> |
|            | (c) What is a sand dune? How sand dunes are formed?                                       | <b>07</b> |

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