| Seat No.: | Enrolment No. |
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| Seat 110  | Emoment 110:  |

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

## **BE - SEMESTER-IV EXAMINATION - SUMMER 2016**

|     | Subj       | ect Code:142203 Date:06/06/2016                                                                                                                                     |          |
|-----|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
|     | •          | ect Name:Geology-2<br>e:10:30 AM to 01:00 PM Total Marks: 70<br>ections:                                                                                            |          |
|     |            | <ol> <li>Attempt all questions.</li> <li>Make suitable assumptions wherever necessary.</li> <li>Figures to the right indicate full marks.</li> </ol>                |          |
| Q.1 | (a)<br>(b) | Classify igneous rocks based on depth of formation and silica saturation.  Describe temperature as an agent of metamorphism and explain dynamothermal metamorphism. | 07<br>07 |
| Q.2 | (a)<br>(b) | Explain origin of sedimentary rocks.  Describe different parts of a typical fold with the help of a neat diagram.  OR                                               | 07<br>07 |
|     | <b>(b)</b> | Explain elastic rebound theory for earthquake occurrence and describe Modified Mercalli Intensity scale.                                                            | 07       |
| Q.3 | (a)        | What are the types of mountain? Differentiate mountains on the basis of genesis.                                                                                    | 07       |
|     | <b>(b)</b> | Give detail description of different types of volcano and material originating out of them.                                                                         | 07       |
|     |            | OR                                                                                                                                                                  |          |
| Q.3 | (a)<br>(b) | Describe Mesozoic rocks of Gujarat.  Describe Gondwana Super group.                                                                                                 | 07<br>07 |
| Q.4 | (a)<br>(b) | Give an illustrative classification of folds based on position of axial plane. Explain different stages for development of tectonic mountains.  OR                  | 07<br>07 |
| Q.4 | (a)<br>(b) | Explain schistosity and lineation in rocks.  What is texture? Describe different types textures observed in intrusive igneous rocks.                                | 07<br>07 |
| Q.5 | (a)        | Explain different geological factors to be studied before and during tunnel excavation.                                                                             | 07       |
|     | <b>(b)</b> | Discuss the merit and demerit: when tunnel alignment is passing across sedimentary rock formations.  OR                                                             | 07       |
| Q.5 | (a)<br>(b) | Describe characteristics of gneiss, sandstone and gabbro. Classify sedimentary rocks based on mode of formation, give suitable examples.                            | 07<br>07 |

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