Seat No.:	Enrolment No.

Subject Code:2132203

GUJARAT TECHNOLOGICAL UNIVERSITY BE – SEMESTER III (NEW) – • EXAMINATION – SUMMER 2015

Subject Name: GEOLOGY-1 Time: 02.30pm-05.00pm **Total Marks: 70 Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. 0.1 Define Geology, and explain importance of different branches of geology in the 07 (a) field of Mining engineering. Describe internal structure of the earth with neat diagram. **07 (b) Q.2** (a) Describe with neat diagram dip, strike and different components of a typical **07** geological fault. **(b)** What are the different physical properties of minerals? Explain Hardness and 07 cleavage with suitable examples. OR **(b)** What is weathering? How minerals deposits are produced as an outcome of 07 weathering? Explain with suitable examples. **Q.3** List the different types of plate boundaries and describe structures associated 07 (a) with convergent plate boundary. **(b)** Explain origin of mid-oceanic ridges. 07 OR 0.3 Describe physical properties of magnetite, bauxite, tourmaline and gypsum. 07 (a) Give an illustrative classification of geological faults based on relative movement 07 **(b)** of adjacent blocks. **Q.4** Explain in detail the principles of stratigraphy. 07 (a) Explain the lithology, distribution and mining importance of Cuddapah super-07 **(b)** group. Explain the Nebular Hypothesis for origin of the Earth. 0.4 07 (a) Explain role of temperature in process of mechanical weathering. **07 (b) Q.5** Explain mature stages of river development along with different geomorphic 07 (a) features produced by river during this stage. Write an explanatory note on glacial deposits. 07 **(b)** OR Define remote sensing and explain different elements of visual interpretation of Q.5 (a) 07 satellite imagery. Explain advantages and limitations of drilling method for subsurface exploration. 07 **(b)**

Date: 04/06/2015