

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-III • EXAMINATION – SUMMER • 2014****Subject Code: 132203****Date: 23-05-2014****Subject Name: Geology - I****Time: 02.30 pm - 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.

Q.1 (a) What is Dip and Strike? Explain the fold and fault with its terminology and figure. **07**

(b) Explain the physical properties of ore minerals, Haematite, Magnetite, Galena, Sphalerite, Bauxite, Wolframite, Pyrite. **07**

Q.2 (a) Explain the internal structure of earth with detailed diagram & properties. **07**

(b) What are the different branches of geology? What are its applications to Mining Engineering? **07**

OR

(b) Differentiate Erosion, Weathering and Denudation. Explain physical and chemical weathering. **07**

Q.3 (a) Explain the erosional and depositional features of wind. **07**

(b) What are the physical properties of mineral? Explain Form & Structure and Hardness. **07**

OR

Q.3 (a) Explain the physical properties of following minerals : Muscovite, Fluorite, Beryl, Kyanite, Graphite, Orthoclase, Agate. **07**

(b) Explain the mineral family- Pyroxene and Feldspar. **07**

Q.4 (a) How fold and faults are identified in field? **07**

(b) What is Unconformity? Explain the types of Unconformity. **07**

OR

Q.4 (a) State the principles of Stratigraphy. Explain the Geological time scale. **07**

(b) Explain pitting, trenching, shaft sinking and aditing with its advantages and limitations. **07**

Q.5 Write note on any two :- **14**

1. Drilling methods in different geological conditions.
2. Dharwar and Cuddaph Supergroup.
3. Geological Maps and Cross Sections.
4. Alluvial Fan and Delta.
