

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-III(New) • EXAMINATION – WINTER 2016

Subject Code:2132203

Date:09/01/2017

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

Q.1	Short Questions	14
	1 Define Geology.	
	2 What are glaciers?	
	3 What is weathering of rocks?	
	4 Name any two processes of chemical weathering of rocks.	
	5 Define wind.	
	6 Name the first five minerals of Mohs' scale of hardness.	
	7 List out the parts of a typical fault.	
	8 What are pedestal rocks?	
	9 Name the regular types of joints observed in igneous rocks.	
	10 Name the factors affecting weathering of rocks.	
	11 Name any one method used for determination of specific gravity of minerals.	
	12 Define dip and strike of rocks.	
	13 Give the chemical composition of Gypsum and Calcite minerals.	
	14 Give the names of any four minerals.	
Q.2	(a) Describe weathering of rocks through the process of frost action.	03
	(b) Discuss the role of plants and organisms in weathering of rocks.	04
	(c) Describe the internal structure of earth with a neat diagram.	07
	OR	
	(c) Reproduced the standard stratigraphic scale along with its Indian equivalents.	07
Q.3	(a) Define the terms: Mineral, Ore and Gangue.	03
	(b) Give the important physical properties and uses of Bauxite and Magnetite.	04
	(c) Enlist the important physical properties of minerals. Describe hardness and lustre properties with examples.	07
	OR	
Q.3	(a) Give a critical view about the origin of the earth.	03
	(b) List out various branches of Geology and discuss their significance in mining engineering.	04
	(c) What is Plate Tectonic Theory? Discuss the different types of plate boundaries.	07
Q.4	(a) Define primary and secondary structures observed in rocks.	03
	(b) What are Folds? Describe with a neat diagram different parts of a typical geological fold.	04
	(c) What are unconformities? Describe various types of unconformities with sketches.	07
	OR	
Q.4	(a) Define faulting. Explain the normal and reverse types of faults.	03
	(b) Define drilling. Narrate different objects of carrying out drilling operations.	04
	(c) Describe the different methods of drilling.	07
Q.5	(a) Describe the streak property of minerals.	03
	(b) Write the importance of geological maps and cross sections.	04
	(c) Explain any two erosional features developed by rivers.	07

OR

- Q.5** (a) Narrate the application of Remote Sensing Techniques in mineral exploration. **03**
(b) Give the distribution, lithology and economic importance of Dharwar System. **04**
(c) Explain the basic principles of stratigraphy. **07**
