

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-III (NEW) EXAMINATION – SUMMER 2019

Subject Code: 2132203

Date: 18/06/2019

Subject Name: Geology-I

Time: 02:30 PM TO 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.

		MARKS
Q.1	(a) Define geology. Write a brief note on branches of geology.	03
	(b) Distinguish between weathering and erosion. Add a note on thermal weathering of rock.	04
	(c) Describe the Internal Structure of Earth with a neat sketch.	07
Q.2	(a) Give a critical view about the origin of the earth.	03
	(b) Discuss the plate tectonic theory.	04
	(c) What is drilling? Give the classification of drilling methods in various geological conditions.	07
	OR	
	(c) Explain important two erosional features developed by rivers.	07
Q.3	(a) Write physical properties of Quartz.	03
	(b) Describe chemical weathering of rocks.	04
	(c) What is a mineral? Explain how the following properties are useful in identification of minerals: (i) Streak (ii) Form	07
	OR	
Q.3	(a) Describe Feldspar Group of minerals.	03
	(b) Explain Fracture and Luster properties of minerals.	04
	(c) Write notes on sand dunes and river meandering.	07
Q.4	(a) Critically explain fundamental laws of Stratigraphy.	03
	(b) Explain dip and strike of a bed/formation with a sketch.	04
	(c) Describe the Archean System of India.	07
	OR	
Q.4	(a) What are folds? Describe the parts of a typical fold with a sketch.	03
	(b) What is a fault? Describe Normal and Reverse type of faults with sketches.	04
	(c) What is unconformity? Describe various types of unconformities with diagrams.	07
Q.5	(a) What is a remote sensing technique? Give its uses in mining engineering.	03
	(b) Give the physical properties of (i) Bauxite (ii) Galena	04
	(c) Discuss the importance of geological maps and cross sections.	07
	OR	
Q.5	(a) Give the importance of Geological Time Scale.	03
	(b) Give the advantages and limitation of drilling methods for sub-surface exploration.	04
	(c) Discuss the role of aerial photo-interpretation in geological exploration for mining projects.	07
