Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–III(New) EXAMINATION – SUMMER 2016

Subject Code:2132203 Date:04/06/2016

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	Give two important physical properties of a mineral.	
	2	Which physical agent is involved in formation of loess deposits?	
	3	Write the names of different layers of interior of the earth.	
	4	Give the hardness of the talc and diamond.	
	5	Write the luster of the pyrite and quartz minerals.	
	6	State whether foot wall is associated with fold or fault.	
	7	Differentiate abrasion and attrition.	
	8	State whether a limb is a part of a fold or fault.	
	9	Write names of hypothesis for the origin of the earth.	
	10	Write five name of important branches of geology.	
	11	State whether calcite is mineral of calcium carbonate or potassium carbonate.	
	12	State whether the Mohorovicic discontinuity is between mantle and core or crust and mantle.	
	13	Define primary and secondary structures.	
	14	Orthoclase is _____ group of mineral. (Mica, Zeolite, Feldspar)	
Q.2	**(a)**	What is sand dunes? How sand dunes are formed?	**03**
	(b)	Write a short note on river meandering.	**04**
	(c)	What is weathering of rocks? Describe the features of mechanical weathering.	**07**
		OR	
	(c)	Write a detail note on chemical weathering.	**07**
Q.3	**(a)**	Define the terms: Mineral, ore and gangue.	**03**
	(b)	Write note on types of plate boundaries.	**04**
	(c)	What is a mineral? Explain how the following properties become useful in identifying minerals: (a)hardness (b)streak	**07**
		OR	
Q.3	**(a)**	Write physical properties of quartz mineral.	**03**
	(b)	Explain form of minerals as physical property.	**04**
	(c)	Describe the internal structure of the earth.	**07**
Q.4	**(a)**	Explain the terms: Strike, dip and apparent dip.	**03**
	(b)	Describe with the help of a neat sketch axis and axial plane of folding.	**04**
	(c)	What is fault? Explain normal and reverse faults.	**07**
		OR	
Q.4	**(a)**	What is an unconformity? Describe angular unconformity.	**03**
	(b)	Explain symmetrical and asymmetrical folds.	**04**

	(c)	What is fold? Explain important parts of a typical fold. Add note on engineering importance of fold.	**07**
Q.5	**(a)**	Describe the core drilling methods.	**03**
	(b)	Write note on soil profile.	**04**
	(c)	Write a short note of the Archaean system of India.	**07**
		OR	
Q.5	**(a)**	What is remote sensing? Describe active and passive systems.	**03**
	(b)	Write note on Delhi system of Indian stratigraphy.	**04**
	(c)	Define geology. Explain branches of geology and its importance in mining engineering.	**07**

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