Seat No.:	Enrolment No.

Subject Code: 140604

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV • EXAMINATION – SUMMER 2013

Date: 19-06-2013

Subject Name: Engineering Geology				
Tin	ne: 10	0:30am - 01:00pm Total Marks: 70		
Inst	ructio	ns:		
	1.	* *		
		Make suitable assumptions wherever necessary.		
	3.	Figures to the right indicate full marks.		
Q.1	(a)	Describe the decomposition of rocks, giving suitable examples.	07	
Q.1	(b)	Define a mineral? Describe the Streak and Hardness properties of minerals.	07	
	(6)	Berme a mineral. Beserve the streak and transless properties of minerals.	07	
Q.2	(a)	Write notes on the following topics:	07	
		(i) Significance of Geology in civil engineering practices		
		(ii) Components of a typical fault		
	(b)	Elaborate how can landslides be prevented?	07	
		OR		
	(b)	What are earthquakes and tsunamis? Add a note on prediction of	07	
		earthquakes.		
Q.3		Write detailed notes on the following topics:		
	(a)	Factors and types of metamorphism	07	
	(b)	Dykes and sills	07	
		OR		
Q.3	(a)	Describe the Rock Cycle in detail.	07	
	(b)	What are sedimentary rocks? Narrate how are these formed?	07	
Q.4		Write notes on the following topics:		
	(a)	Anticlines and synclines	07	
	(b)	Artificial recharging of subsurface water	07	
		OR		
Q.4	(a)	Write a note on application of Remote Sensing and GIS in civil engineering.	07	
	(b)	Narrate the significance of geological maps and sections.	07	
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Q.5	(a)	Narrate the merits and demerits of a tunnel alignment passing through faulted	07	
	<i>a</i> >	rock formations.	Λ=	
	(b)	Write detailed notes on crystallographic axes and elements of symmetry.	07	
0.5	(e)	OR Classify the following rocks as per their origin:	07	
Q.5	(a)	Classify the following rocks as per their origin: (i) Gabbro (ii) Slate (iii) Granite (iv) Marble	07	
	(b)	(v) Limestone (vi) Shale (vii) Schist Describe the zonal distribution of ground water.	07	
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