Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–IV EXAMINATION – WINTER 2015

Subject Code: 140604 **Date:04/01/2016**

Subject Name: Engineering Geology

Time: 02:30pm to 05:00pm **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)**	Application of geology in civil engineering.	**07**
	(b)	Give the definition of Weathering. Describe the chemical weathering in detail.	**07**
Q.2	**(a)**	Define the term plate-tectonics & describe the plate boundaries.	**07**
	(b)	What is mineralogy? Describe the physical properties of mineral. In detail describe only hardness& streak.	**07**
		OR	
	(b)	What is crystal? Describe elements of crystallography.	**07**
Q.3	**(a)**	What is petrology? Describe the structures of igneous rocks.	**07**
	(b)	What is the origin of sedimentary rocks? Give classification of sedimentary rocks.	**07**
		OR	
Q.3	**(a)**	Describe the agents & kind of metamorphisms.	**07**
	(b)	What are the geological properties of building stone? Describe Granite & Marble.	**07**
Q.4	**(a)**	Give the terminology of fold & fault in detail	**07**
	(b)	Define the terms: unconformity, inlier, outlier, outcrop, joint dip strike.	**07**
		OR	
Q.4	**(a)**	Give the classification of fault based on apparent moment.	**07**
	(b)	Describe prediction of earthquake.& describe earthquake waves	**07**
Q.5	**(a)**	Define the terms: aquifer, aquiclude, aquitard, porosity, permeability, specific yield, ground water recharge.	**07**
	(b)	What is tunnel? Describe tunneling in different type of rocks.	**07**
		OR	
Q.5	**(a)**	Give definition of landslides. Describe factor affecting landslides.	**07**
	(b)	What is a geological criterion for site selection of dam& reservoir?	**07**

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