Seat N	o.: _	Enrolment No.	_	
		GUJARAT TECHNOLOGICAL UNIVERSITY ME – SEMESTER IV (NEW) – • EXAMINATION – SUMMER 2016		
Subject Code: 2744302 Date:04/05/			2016	
Subje	ect I	Name: ENVIRONMENTAL GEOTECHNOLOGY		
		:30 am to 01:00 pm Total Marks: 70)	
Instruc	1. 2.	s: Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.		
Q.1		Discuss the multidisciplinary nature of geoenvironmental engineering.	14	
Q.2	(a)	Explain the importance of environmental geotechnology from view point of human health and pollution.	07	
	(b)	Why and how soil is used in waste disposal practice to prevent the flow of liquid contaminants into environment.	07	
		OR		
	(b)	Enlist basic mechanisms responsible for soil waste contamination and various geotechnical problems of soil due to interaction with pollutant.	07	
Q.3	(a)	Write note on the electrical double layer theory to understand the mechanisms involved in changes of physical and engineering properties of clay.	07	
	(b)	OR	07	
Q.3	(a) (b)	Discuss various ground modification techniques in waste management. Write note on (i) Detection of Polluted Zone (ii) Monitoring Effectiveness of Designed Facilities.	07 07	
Q.4	(a)	What are the controlling and remedial measures to reduce subsurface contamination?	07	
	(b)	Discuss in brief different soil water contaminant interaction mechanism. OR	07	
Q.4	(a)	What is the aim of integrated solid waste management program?	07	

OR

Bring out the difference between a natural attenuation landfill and an engineered

(b)

Q.5

Q.5

landfill.

Write note on:

Write note on stability of landfills. **07** (a) Explain operation of pond used to treat slurry waste with neat sketch. **07 (b)**

(i) Effect of environmental factors on tensile strength. (ii)Influence of environmental factor on strength of soil. (iii) Effect of environmental condition s on bearing capacity.

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07

14