Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER- II(New course) • EXAMINATION (Remedial) - WINTER- 2015

Subject Code: 2723301Date: 08/12Subject Name: Groundwater ManagementTotal MarkTime:2:30 pm to 5:00 pmTotal MarkInstructions:1. Attempt all questions.2. Make suitable assumptions wherever necessary.3. Figures to the right indicate full marks.		et Code: 2723301 Date: 08/12/2015	Date: 08/12/2015	
		s: 70		
Q.1	(a)	Define Groundwater management. Enlist and explain various factors affecting groundwater management.	07	
	(b)	Define Aquifer. Enlist and explain various types of aquifer.	07	
Q.2	(a)	Explain the phenomenon of Seawater intrusion with neat sketch. Also enlist various effect of sea water intrusion on groundwater quality.	07	
	(b)	Discuss the significance of hydraulic conductivity, Transmissivity and specific yield in groundwater management.	07	
	(-)	OR	~ -	
	(b)	Discuss about construction and maintenance of well. Also draw the neat typical sketch showing various components of well.	07	
Q.3	(a)	Define following terms : (1) Subsidence (2) Aquitard (3) Radius of influence (4)Perched Aquifer	07	
	(b)	Describe the objectives of pumping Test. Also describe the procedure of pumping test	07	
Q.3	(a)	OR Differentiate between Recharge well and Discharge Well. Support your answer with neat sketch of drawdown curve. Also write the equations to find rate of flow (Q) for recharge and discharge well.	07	
	(b)	Write short note on :	07	
		(1) Multiple Well System (2) Well Hydraulics		
Q.4	(a)	Define artificial recharging of groundwater and describe its various advantages.	07	
	(b)	Discuss the Darcyøs Law and its significance in groundwater management. Support your answer with suitable example.	07	
		OR		
Q.4	(a)	Enlist and explain various design criteria of well.	07	
C .	(b)	Write short notes on :	07	
		 Contaminant transport process in groundwater. In based Basebases method 		
Q.5	(a)	(2) Induced Recharge method Discuss significance of groundwater quality in groundwater management. Also	07	
	0	discuss the factors affecting groundwater quality.	07	
	(b	Enlist and discuss various causes of groundwater pollution. Also discuss the effects of groundwater pollution.	07	
		OR		
Q.5	(a)	Explain significance of Groundwater energy balance	07	
	(b	Enlist and discuss various strategies to reduce groundwater pollution. Also discuss the role of legislation for this.	07	
