Seat No.:			Enrolment No	

GUJARAT TECHNOLOGICAL UNIVERSITY M. E. - SEMESTER – II • EXAMINATION – WINTER • 2014

		code: 1721806 Date: 05-12-2	014
•	: 02	Name: Environmental Modeling 2:30 pm - 05:00 pm Total Marks	: 70
mstru	1. 2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)	• • • • • • • • • • • • • • • • • • • •	07 07
Q.2	(a) (b)	Enlist and explain the types of equations used to find the growth rate of biomass in lakes	07 07
	(b)	OR Write the chemical equation showing algae production in lake and derive the relationship indicating relationship between Nitrogen ,Phosphorus and algal cells.	07
Q.3	(a)		07
	(b)	in a stream With the help of a neat sketch, write a short note on DO sag curve. OR	07
Q.3	(a)	Write short notes on: (i) Waste Load Allocation	10
	(b)	(ii) River Segmentation Differentiate between: Deoxygenation and reaeration	04
Q.4	(a) (b)		07 07
0.4	(-)	OR	00
Q.4	(a)	Estimate the total biomass production in terms of algal cell mass in one month, if an effluent containing 0.05 mg of phosphate is discharged daily in to the lake. Also estimate the quantity of nitrogen consumed.	08
	(b)	Explain clearly the difference between Calibration and Simulation.	06
Q.5	(a) (b)	**	07 07
Q.5	(a)		10
	(b)		04

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