Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – IV • EXAMINATION – SUMMER • 2013

Sul Tir	bject ne: 1	t code: 741201 Date: 14-05-2013 t Name: Hydrological Modeling 10.30 am – 01.00 pm Total Marks: 70 etions:	
	1.	. Attempt all questions. Make suitable assumptions wherever necessary.	
Q.1	(a) (b)	Differentiate between physical model and computer model of water resources system. Explain watershed simulation.	07
Q.2	(a) (b)	Define groundwater model and write the major application of it. What is sensitivity analysis? Explain how it is applied to hydrological models. OR	0′. 0′.
	(b)	Compare the ARS-SWAT and HEC-HMS simulation packages.	0
Q.3	(a) (b)	Explain the application of modeling in water resources management. Write short note on a statistical models of water resources OR	0' 0'
Q.3	(a) (b)	Write key modules and algorithm of MODFLOW. Compare the analog simulation and digital simulation.	0' 0'
Q.4	(a)	Discuss the features of inverse modeling for simulating the groundwater	0
	(b)	system. Explain time variant groundwater flow modeling. OR	0′
Q.4	(a) (b)	What is FEM? Describe how it is used in water resources modeling. Write the role of GIS technology in pre processing and post processing of hydrological data.	0' 0'
Q.5	(a) (b)	Explain multiple component models. Describe the use of NRCS CN method in various types of watershed models. OR	0' 0'
Q.5	(a) (b)		07 07
