Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY BE – SEMESTER-VIII • EXAMINATION – SUMMER • 2014

Subject Name: Modelling and Simulation Techniques

Date: 27-05-2014

Subject Code: 180804

		ne: 10:30 am - 01:00 pm Total Marks: 70	
		 Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. 	
Q.1	(a)	What is the difference between Block Parameters and Tunable Parameters? Explain in details.	07
	(b)	List and explain the graphical representation of a block that has states.	07
Q.2	(a) (b)	Explain the basic elements of Simulink Software. Explain the Model compilation, Simulation loop phase and Link phase in details. OR	07 07
	(b)		07
Q.3	(a)	Define the following: (1) Block diagram Semantics (2) Time Step (3) Block Method (4) Model Method (5) Block Sample Times (6) Signals (7) Custom Block	07
	(b)		07
		OR	
Q.3	(a) (b)	Draw and explain Triangle Wave Generator model. Explain Modeling Electronic Component. a.) Parameterizing an Exponential diode from a Datasheet.	
Q.4	(a) (b)	Explain which are the components used in Simelectronics libraries. Explain modelling of continuous system with example. OR	07 07
Q.4	(a)		07
	(b)	Explain Runge-Kutta method in details.	07
Q.5	(a)	Formulated to Solve Series RLC Using Resistor Voltage and Inductor voltage with diagram.	07
	(b)	Explain the difference between the discrete solver and continuous solver.	07
		OR	
Q.5	(a) (b)	Explain the basic steps to use the Simulink software in brief. Specifying Simulation Accuracy/Speed Tradeoff parameters	07 07
