Seat No.:	Enrolment No.

## GUJARAT TECHNOLOGICAL UNIVERSITY

## BE SEMESTER VIII• EXAMINATION – SUMMER 2015

Subject Code: 180804		Code: 180804 Date:05/05/201	Date:05/05/2015	
Subject Name: Modeling and Simulation Techniques Time: 10.30AM-01.00PM Instructions:  Total Mai		ks: 70		
	1. 2.	Attempt all questions.		
Q.1	(a) (b)	List and explain the graphical representation of a block that has states. Specifying Simulation Accuracy/Speed Tradeoff parameters.	07 07	
Q.2	(a) (b)	Explain the basic elements of Simulink Software. What do you mean by Algebraic loop? Which techniques is used to eliminate the Algebraic loop.	07 07	
	<b>(b)</b>	<b>OR</b> Formulated to Solve Series RLC Using Resistor Voltage and inductive Voltage with diagram.	07	
Q.3	(a) (b)	Draw and explain Triangle Wave Generator model.  Explain which are the components used in SimElectronics Libraries.  OR	07 07	
Q.3	(a) (b)	What is Solvers? Explain in detail. Explain Runge-Kutta method in details.	07 07	
Q.4	(a) (b)	Explain Modeling Electronic Component. a).Parameterizing a Piecewise Linear Diode Model How to develop a linear model for a DC motor, how to analyze this model under MATLAB and how to simulate the open-loop and closed-loop systems under SIMULINK.	07 07	
Q.4	(a) (b)	OR  Explain and design a flow chart presents for Simscape simulation sequence.  Which are the SimElectronics Additional Components/SPICE-Compatible Components?	07 07	
Q.5	(a) (b)	Explain CLD with Nested Feedback Loops.  Explain the difference between the discrete solver and continuous solver.  OR	07 07	
Q.5	(a) (b)	Explain the process for Creating Models.  Explain Modeling Electronic Component.  a).Parameterizing an Exponential Diode from a SPICE Netlist	07 07	

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