

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-VIII EXAMINATION – SUMMER 2016**

**Subject Code:180804**

**Date:16/05/2016**

**Subject Name:Modelling and Simulation Techniques (Department Elective - II)**

**Time:10:30 AM to 01:00 PM**

**Total Marks: 70**

**Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain the basic elements of Simulink software. **07**  
(b) Explain modelling of continuous system & Formulated to Solve Series RLC Using Resistor Voltage with diagram. **07**

- Q.2** (a) Explain the block parameters & tunable parameters in details. **07**  
(b) What do you mean by Modelling & Simulation? Enlist its advantages & disadvantages. **07**

**OR**

- (b) Specifying Simulation Accuracy/Speed Trade-off parameters. **07**

- Q.3** (a) What do you mean by subsystem? Explain types of subsystems. **07**  
(b) Define the Algebraic loop. Explain it with example. **07**

**OR**

- Q.3** (a) Explain Parameterizing an Exponential Diode from a SPICE Netlist. **07**  
(b) Explain the types of blocks which are used in Simulink library. **07**

- Q.4** (a) List and explain the graphical representation of a block that has states. **07**  
(b) Explain the Model compilation, Simulation loop phase & Link phase in details. **07**

**OR**

- Q.4** (a) Design and Building the Triangle Wave Generator Model. **07**  
(b) Explain the Transfer function, Poles & Zeros. **07**

- Q.5** (a) Explain the basic steps to use Simulink software in brief with figures. **07**  
(b) Explain the Block diagram Semantics, Block method & Model Method in details. **07**

**OR**

- Q.5** (a) Define Solver. Explain the types of solvers with example. **07**  
(b) Design a RLC Circuit Simulink Model. **07**

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