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BIEEE-001

B.Tech. – VIEP – ELECTRICAL ENGINEERING (BTELVI)

00575 **Term-End Examination**

December, 2014

BIEEE-001 : DYNAMIC SYSTEM SIMULATION

Time : 3 hours *Maximum Marks : 70*

Note : *Attempt any **seven** questions. All questions carry equal marks. Assume suitable data wherever not provided.*

1. What is SIMULINK ? Elaborate its applications in Electrical Engineering. *4+6*

2. Define various configuration parameters of a Simulink model. Also mention the specialities of Simulink as a programming tool. *5+5*

3. Discuss the simulation of system using MATLAB and mention the functions of command window, edit window and figure window in MATLAB software. *10*

4. Explain the procedure to design a Simulink based simulation model for the analysis of a 'Three-phase 120° conduction mode Inverter'. *10*

5. Discuss the blockset based simulation of a digital control system using first order transfer function model. *10*

6. Explain the various steps involved in the simulation of a single-phase full-converter feeding dynamic load with the help of Simulink. *10*

7. Develop the generalized machine model for induction motor using MATLAB/Simulink. *10*

8. Explain the steps involved in the simulation of "ARMA process". *10*

9. Write short notes on the following : *5+5*

   (a) Markovian model

   (b) Steady-state behaviour of finite population model