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BIEEE-001

B.Tech. DEGREE PROGRAMES

Term-End Examination

December, 2013

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 do you understand by "m-files" ? Explain the difference between "Script m-file" and "Function m-file". **4+6=10**

2. Discuss various tool boxes available in MATLAB software. Also explain the function performed by them. **10**

3. Explain the procedure for the design of a SIMULINK based simulation model for the analysis of a current source inverter driven induction motor. **10**

4. Discuss the block set based simulation of a pneumatic system using transfer function model. **10**

5. How will you simulate a three-phase semi-converter feeding a purely resistive load with the help of MATLAB/SIMULINK ? **10**

6. Explain the steps involved in the simulation of "MA Process". **10**

7. How a state-space model can be converted into zero-pole gain transfer function ? Explain with the help of a suitable example. **10**

8. Describe the steady-state behaviour of infinite population Markov models. **10**

9. What are the various matrix operations, which can be performed using MATLAB ? Also tabulate various commands for these operations. **10**

10. Write short-notes on *any two* of the following : **5+5**
    (a) Characteristics of queuing systems.
    (b) Creation of m-files.
    (c) MATLAB functions.