

Code No: **RT41055****R13****Set No. 1****IV B.Tech I Semester Supplementary Examinations, February/March - 2018****SIMULATION MODELING**  
**(Computer Science and Engineering)****Time: 3 hours****Max. Marks: 70***Question paper consists of Part-A and Part-B**Answer ALL sub questions from Part-A**Answer any THREE questions from Part-B***\*\*\*\*\*****PART-A (22 Marks)**

1. a) Define entity, attribute and activity. [3]
- b) Mention the different types of system simulation. [4]
- c) Write about the system simulation language. [4]
- d) Write short notes on system dynamics. [4]
- e) List out the types of simulation queues. [3]
- f) What do you mean by event scanning? Explain. [4]

**PART-B (3x16 = 48 Marks)**

2. a) Briefly describe the concept of a system and models used in the system. [8]
- b) Describe the simulation of an inventory system with a neat diagram. [8]
3. a) Mention the guide lines for determining the various levels of model in detail. [8]
- b) Compare the simulation and analytical method of system simulation. [8]
4. a) Write short notes on system dynamic growth models. [8]
- b) Simulate a queue with single queue, single server. Make your own assumption about the arrival patterns of customers. [8]
5. a) Explain Monte Carlo technique for simulation. [8]
- b) Write short notes on logistics curves. [8]
6. a) Explain the queueing theory and types of queues. [8]
- b) Write short notes on numerical experimentation. [8]
7. Write short notes on  
a) Data structures used in GPSS and SIMSCRIPT [8]  
b) Simulation algorithms in GPSS and SIMSCRIPT [8]