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
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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]