Code No: **R42058** **R10** **Set No. 1**

IV B.Tech II Semester Regular/Supplementary Examinations, April - 2015

SIMULATION MODELLING

(Common to Computer Science & Engineering and Information Technology)

Time: 3 hours **Max. Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks
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1 a) Compare and contrast continuous and discrete systems in detail. [8]

b) Draw flowchart and explain the steps involved in simulation study. [7]

2 a) Compare and contrast simulation and analytical methods. [8]

b) Explain in detail cob web models. [7]

3 a) Compare and contrast analog computers and hybrid computers. [8]

b) Discuss elaborately about logistic curves. [7]

4 a) Explain different probability functions. [8]

b) Discuss elaborately about stochastic variables. [7]

5 a) Describe arrival pattern distribution of queuing theory. [8]

b) Discuss different queuing disciplines of queuing theory. [7]

6 a) Explain discrete system simulation's generalization of arrival patterns in detail. [8]

b) Explain in detail how to analyze the simulation output. [7]

7 a) Explain the general description of GPSS and SIMSCRIPT. [8]

b) Name any five blocks of GPSS and explain. [7]

8 Write short notes on

(i) Data structures of simulation programming
(ii) Event scanning
(iii) Simulation algorithms in GPSS [15]

Code No: **R42058** **R10** **Set No. 2**

IV B.Tech II Semester Regular/Supplementary Examinations, April - 2015

SIMULATION MODELLING

(Common to Computer Science & Engineering and Information Technology)

Time: 3 hours **Max. Marks: 75**

Answer any FIVE Questions

All Questions carry equal marks

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1 a) Explain statistic mathematical model and dynamic mathematical model with example. [8]

b) Explain the principles used in modeling. [7]

2 a) Explain different simulation techniques in detail. [8]

b) Explain distribution log models in brief. [7]

3 a) Compare and contrast analog computers and hybrid computers. [8]

b) Discuss elaborately about logistic curves. [7]

4 a) Explain different montecarlo techniques in brief. [8]

b) Explain briefly the uniform distribution technique. [7]

5 Explain in detail different mathematical solutions to queuing problem. [15]

6 a) Explain different simulation programming tasks. [8]

b) Explain in detail how to analyze the simulation output. [7]

7 What is SIMSCRIPT? What is its importance? Discuss its various functions. [15]

8 Write short notes on

(i) Implementation of activities in simulation programming

(ii) Events and queues

(iii) Event scanning [15]

Code No: **R42058** **R10** **Set No. 3**

IV B.Tech II Semester Regular/Supplementary Examinations, April - 2015

SIMULATION MODELLING

(Common to Computer Science & Engineering and Information Technology)

Time: 3 hours **Max. Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks
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1	a)	Explain the basic components of a system with suitable example.	[8]
	b)	Explain elaborately different types of models of simulation.	[7]
2	a)	Explain the simulation of queuing problems.	[7]
	b)	Compare and contrast simulation and analytical methods.	[8]
3	a)	Explain in brief continuous system simulation language CSMP.	[8]
	b)	Discuss in brief about system dynamic growth models.	[7]
4	a)	Explain different random number generating algorithms in brief.	[8]
	b)	Discuss elaborately about stochastic variables.	[7]
5	a)	Explain arrival pattern distribution of queuing theory.	[8]
	b)	Discuss different queuing disciplines of queuing theory.	[7]
6	a)	Explain discrete system simulation's generalization of arrival patterns in detail.	[8]
	b)	W hat are different simulation programming tasks explain.	[7]
7	a)	Explain the general description of GPSS and SIMSCRIPT.	[8]
	b)	Name any five blocks of GPSS and explain.	[7]
8	a)	Explain events and single server queuing system in detail.	[7]
	b)	Explain different simulation algorithms in GPSS and SIMSCRIPT.	[8]

Code No: **R42058** **R10** **Set No. 4**

IV B.Tech II Semester Regular/Supplementary Examinations, April - 2015

SIMULATION MODELLING

(Common to Computer Science & Engineering and Information Technology)

Time: 3 hours **Max. Marks: 75**

Answer any FIVE Questions

All Questions carry equal marks

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1 a) Define simulation? What are advantages and disadvantages of simulation system explain. [8]

b) What are different principles used in modeling explain? [7]

2 a) Explain different types of simulation. [7]

b) Explain in detail cob web models. [8]

3 a) Explain numerical solution of differential equations in brief. [8]

b) Explain in detail system dynamic growth models. [7]

4 a) Explain different montecarlo techniques in brief. [8]

b) Explain different random number generation algorithms in brief. [7]

5 Explain in detail different mathematical solutions to queuing problems with examples. [15]

6 a) Explain different discrete system simulation events in detail. [8]

b) What are different simulation programming tasks? Explain. [7]

7 What is SIMSCRIPT? What is its importance? Discuss its various functions. [15]

8 a) Define event? Explain asynchronous events with example. [7]

b) Explain different data structures of GPSS and SIMSCRIPT. [8]