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## CS 131606

Roll No. of candidate

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2018

## B.Tech. 6th Semester End-Term Examination MODELLING AND SIMULATION

Full Marks – 100

Time - Three hours

The figures in the margin indicate full marks for the questions.

Answer question No. 1 and any SIX from the rest.

- 1. Answer the following questions.
- $(10 \times 1 = 10)$
- (a) Define the term modeling and simulation.
- (b) What is the Continuous and discrete system?
- (c) What do you mean by system modeling?
- (d) What is cost analysis?
- (e) What is the need of system modeling?
- (f) Name any five block of GPSS?
- (g) What is discrete probability function?
- (h) Define feedback system and its application?
- (i) Write down the types of simulation models.
- (j) What do you mean by system?

[Turn over

2.	Answer the following questions.			
	(a)	Which are the major software industries wh simulation is used? Name any two simulat software.		
	(b)	Monte Carlo simulation is a special case stochastic simulation. Comment.	of (5)	
	(c)	What is the importance of system design a analysis in the Simulation of a system?	(5)	
3.	Answer the following questions.			
	(a)	Explain about the cobweb model.	(8)	
	(b)	What is SIMSCRIPT? What is its importance	e?(5)	
	(c)	Define entity activity and attribute.	(2)	
4.	Answer the following questions.			
	(a)	Explain the characteristics of CDF.	(5)	
	(b)	Explain about exponential model.	(5)	
	(c)	Explain about the real time simulation.	(5)	
5.	Answer the following questions.			
	(a)	Explain analog computer simulation in detail	ils. (10)	
	(b)	How simulation helps in time-to-market industry.	(5)	
6.	Answer the following questions.			
	(a)	Explain about Statistical output analysis.	(5)	
	(b)	Explain the term system design and syspostulation.	tem (5)	
	(c)	Explain about the congestion in system.	(5)	

- 7. Answer the following questions.
  - What is system and environment'? Explain the (a) components of system with example. (10)
  - (b) Describe the types of system model. (5)
- Answer the following questions. 8.
  - Explain the following component of simulation (a) system with an example of bank system. (10)
    - System (i)
- (ii) Entity
- (iii) Attribute (iv) Activity
- (v) Event
- Explain about the closed model. (b)

(5)

- 9. Answer the following questions.
  - (a) Explain the various steps of simulation study with example. (8)
  - (b) The following table of data pertaining to how shoppers buy goods

No of Item Bought	No of Customers
1	50
2	10
3	25
4	65
5	85

Find the graph of CDF and PDF.