

Roll No.

Total No. of Questions : 08]

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Paper ID [IE504]

(Please fill this Paper ID in OMR Sheet)

M.Tech. (Sem. - 1st)

SIMULATION OF INDUSTRIAL SYSTEMS (IE - 504)

Time : 03 Hours

Maximum Marks : 100

Instruction to Candidates:

- 1) Attempt any **Five** questions.
- 2) **All** questions carry equal marks.

- Q1)** (a) Give concept of system and system environment.
(b) Discuss the Monte Carlo method in detail.
- Q2)** (a) Distinguish between continuous systems.
(b) Give advantages and limitations of system simulations.
- Q3)** (a) Give comparison between numerical integration and continuous simulation system.
(b) What do you understand by Time flow Mechanisms in the discrete simulation system? Explain it.
- Q4)** (a) Describe the testing of random numbers for randomness and for auto correlation.
(b) What is the queuing system and how to generate stationary and time dependent queues?
- Q5)** What is the necessity of simulation in inventory problems? Also discuss the forecasting and regression analysis.
- Q6)** (a) What are the variance reduction techniques? Discuss.
(b) Discuss the optimization procedures and search methods of simulations.
- Q7)** Describe in details the simulation of PERT. Also discuss the computer time sharing problem in this context.
- Q8)** Write short notes on :
- (a) SIMSCRIPT.
 - (b) Stratified sampling.
 - (c) Importance and limitations of special propose languages.

