**Exam. Code : 208603**
**Subject Code : 3709**

## M.Sc. Information Technology 3rd Semester
## SYSTEM SIMULATION
### Paper : MIT-304

Time Allowed—3 Hours] [Maximum Marks—100

**Note :—** Attempt any **five** questions. All questions carry equal marks.

1. Define the term system. Discuss various types of systems. Alos compare continuous and discrete systems.

2. Differentiate between :

   (a) Monte Carlo computation and stochastic simulation.

   (b) Analytic and Simulation Models.

3. Briefly discuss various characteristics of a queuing system. Also explain the simulation of single-server queuing system with the help of suitable example.

4. Write short notes on the following :

   (a) Expression based languages.

   (b) Block-structured continuous simulation languages.

5. (a) Discuss the simulation of a water reservoir system.

   (b) Briefly discuss the concepts of simulation of continuous system with the help of an example.

6. Briefly discuss Forecasting and regression analysis.

7. Discuss various factors in the selection of a discrete system simulation language.

8. Write short notes on :

   (a) Generation of non-uniformly distributed numbers.

   (b) GPSS.

   (c) Simpack

   (d) Gasp IV.