

Roll No

MEMT-201

M.E./M.Tech., II Semester

Examination, June 2016

Modeling and Simulation

Time : Three Hours

Maximum Marks : 70

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

1. a) Give a suitable definition and classification of system.
Give an example for each class. 7
b) Describe physical, mathematical and computer models
of a system. 7
2. a) Explain the need of simulation. 7
b) What are distributed logged models? 7
3. a) What is stochastic variable? How does it helps in
simulation? 7
b) What is an exponential distribution? Explain with the help
of a suitable diagram. 7
4. a) Why the random numbers generated by computer called
pseudo random numbers? Discuss the congruence method
of generating the random numbers. 7

- b) Describe a procedure to physically generate random
numbers on the interval [0.1] with two digit accuracy. 7
5. a) Write a short note on discrete simulation languages. 7
b) How various arrival patterns are generated for the queues?
Explain with examples. 7
6. a) Explain how to select input model without the knowledge
of data. How to identify the distribution with data? 7
b) What is the procedure to perform verification and
validation of simulation models? 7
7. a) What type of simulations can be performed for analysis
of output? 7
b) How the analyse the output for a steady state simulation? 7
8. Write short note on (any two): 14
a) O/p analysis of terminating simulations
b) Goodness of fit tests
c) Rejection method
