

Roll No

MCTA-301(E)

M.E./M.Tech., III Semester

Examination, June 2016

Simulation and Modeling (Elective - I)

Time : Three Hours

Maximum Marks : 70

- Note:** i) Attempt any five questions out of eight.
ii) All questions carry equal marks.

1. a) Explain Modeling and Simulation methodology.
b) Explain concept of continuous and discrete random variables and their distributions.
2. a) Differentiate between linear, nonlinear and stochastic models.
b) What are the characteristics of queuing system? Describe Poisson's formula.
3. a) Explain queuing system with its application.
b) What are the system dynamics modeling? Explain in detail.
4. a) Differentiate between verification and validation.
b) Describe simulation languages comparison and selection.
5. a) Describe birth-death system.
b) Explain simulation of system dynamics models.

6. a) What are the concept of probability and random variables,
b) Explain validation of experimental models, testing and analysis.
7. a) Explain analysis of M/M/1 queues.
b) Explain design of simulation experiments.
8. Write Short notes on :
 - a) SIMULA
 - b) DYNAMO
 - c) STELLA
 - d) POWERSIM
