Roll No. .... Total Pages : 2

BT-8/M-20 **38036**

MODELING AND SIMULATION

Paper–EEcT-402E

Option–II

Time Allowed : 3 Hours] [Maximum Marks : 100

Note : Attempt **five** questions in all, selecting at least **one** question from each Unit.

UNIT–I

1. (a) Explain the various steps in simulation study, with the help of a neat flow diagram. 10

   (b) Discuss what are Lumped and Distributed parameter systems. How they are different and what are their applications ? 10

2. (a) Define briefly with a suitable example the Deterministic and Stochastic systems. 10

   (b) Explain the terms : 10

      (i) Entity

      (ii) Attribute

      (iii) Activity

      (iv) Event.

UNIT–II

3. (a) Explain Discrete-event System simulation and Steps in a Simulation Study. 10

(b) Explain auto correlation Test for random numbers. 10

4. Draw and explain the flow charts for single server and two server queue simulation. 20

UNIT–III

5. (a) What are the techniques for verification of simulation model ? 10

(b) How you will differentiate the simulation languages with simulators ? 10

6. (a) What are different transmission parameters used for simulation ? Explain these parameters in detail. 10

(b) Explain briefly the transmission parameters. 10

UNIT–IV

7. (a) What are the different types of MATLAB programming ? Explain. 10

(b) Explain the plot tools and time series tools in MATLAB environment. 10

8. (a) Explain the dynamic system simulation using Simulink. 10

(b) Describe the general applications of Simulink in detail. 10