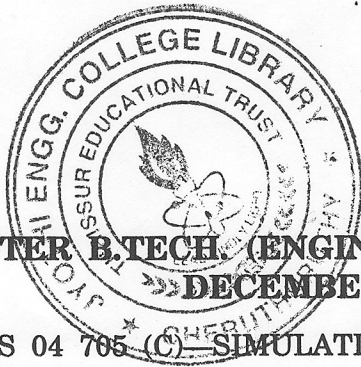


**D 23222**



Name.....

Reg. No.....

**SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION  
DECEMBER 2011**

**CS 04 705 (C) SIMULATION AND MODELING**

**(2004 Admissions)**

Time : Three Hours

Maximum : 100 Marks

*Answer all questions.*

**Part A**

- I. (a) List and explain some areas of applications for system simulation.  
(b) How to test the numbers for randomness ?  
(c) Explain the general features of GPSS.  
(d) Explain the length of simulation runs.  
(e) What is a multi-server queue ? Explain.  
(f) Explain about the formulation of queueing problems.  
(g) What is backward pass computation ?  
(h) Explain the merits of stochastic networks. (8 × 5 = 40 marks)

**Part B**

- II. (a) Explain the Erlang distribution. Write a computer program in C language for generating Erlang variates. (15 marks)
- Or*
- (b) Explain about the following :  
(i) Modeling continuous systems. (7 marks)  
(ii) Event scheduling. (8 marks)
- III. (a) What is SIMULA ? Explain its features. (15 marks)
- Or*
- (b) Explain about the Statistical reliability in evaluating simulation experiments. (15 marks)
- IV. (a) What is a tandom queue ? Explain the simulation of tandom queues. (15 marks)
- Or*
- (b) Explain the generation of arrival and service pattern in queueing system. (15 marks)
- V. (a) Describe in detail the simulation of complete network. (15 marks)
- Or*
- (b) (i) What is network model of a project ? (5 marks)  
(ii) Define dummy activity. How to analyse the activity network ? (10 marks)

[4 × 15 = 60 marks]