

42754



**SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, MAY 2013**

**CS04 705C - SIMULATION & MODELLING**

**Time: Three hours**

**Maximum: 100 Marks**

**Part A**

*Answer all questions*

- I
1. List the features of continuous system simulation.
  2. Explain steps involved in the generation of stochastic variates.
  3. How statistical reliability is used in evaluating simulation experiment?
  4. Write about the significance of confidence interval in terminating simulation runs.
  5. Mention about the advantages and disadvantages of simulation using single server queues.
  6. What is generation of service patterns? Explain.
  7. List the merits of stochastic networks.
  8. Define network diagram. Explain with an example.
- II. (a) Elaborate on Erlang distribution using examples. (8 x 5 = 40 Marks)  
Or  
(b) Explain event scheduling and process interaction approaches. (1 x 15 = 15 marks)
- III. (a) Describe programming considerations of GPSS simulation language.  
Or  
(b) Compare the features of SIMSCRIPT, SIMULA and GPSS (1 x 15 = 15 marks)
- IV. (a) Describe the generation of arrival and service pattern in queuing system  
Or  
(b) Write a program for single server queue using any one of the simulation language (1 x 15 = 15 marks)
- V. (a) Describe the methods of simulation of complete network.  
Or  
(b) Explain the methods of determining float, slack and critical path using forward pass. (1 x 15 = 15 marks)

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