Roll No.....

MCA –2014

SYSTEM SIMULATION & MODELLING

Paper Code (MCA-504A)

Paper Id. [B0126]

Time : 3 Hrs **Maximum Marks: 60**

Section A, B, C and D have two questions carrying 10 marks each.
Candidates are required to attempt one question from each section and section E is compulsory.
Each question in section E carry 2 marks each.

Section A:

1. What are discrete systems? Explain with help of example
2. Differentiate between continuous and discrete simulation with examples.

Section B:

3. What is Monte Carlo computation? Find value of Π (pie) using this method.
4. Differentiate between fixed time step and event to event model.

Section C:

5. Discuss simulation of two server queue.
6. Explain with help of flowchart one server queue.

Section D:

7. Write a note on: Simulation of inventory system.
8. Write a note on:GPSS

Section E:

9. a) What is system design?
   b) Define system simulation.
   c) Differentiate between deterministic and stochastic simulation.
   d) Define random numbers.
   e) Briefly explain any one method for generation of random numbers.
   f) List applications of random numbers.
   g) Why is simulation used and what are its applications?
   h) Define model.
   i) What are the different types of models
   j) What is importance of probability in simulation?

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