

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

MCA (Sem.-5th)

SYSTEM SIMULATION & MODELLING

Subject Code : MCA-504A

Paper ID : [B0126]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTIONS-A, B, C & D contains TWO questions each carrying TEN marks each and students has to attempt any ONE question from each SECTION.
2. SECTION-E is COMPULSORY carrying TWENTY marks in all.
3. Use of non-programmable scientific calculator is allowed.

SECTION-A

1. What are System Models? Differentiate between Continues and Discrete systems.
2. What do you mean by System Simulation? Discuss various techniques available for system simulation.

SECTION-B

3. Differentiate between fixed time step and event-to-event model.
4. Differentiate between Monte Carlo Computation and Stochastic simulation.

SECTION-C

6. Discuss Simulation of two server queue with example.

SECTION-D

7. How you will simulate inventory system? Discuss in detail along with various inventory operations.
8. Discuss in detail simulation of Telephone System.

SECTION-E

9. Write briefly :

- (a) What do you mean by Stochastic variables?
- (b) What are various types of System Models available?
- (c) Discuss Generation of Random Numbers.
- (d) What are advantages of using autopilot simulation?
- (e) Give any example of Continuous System Simulation.
- (f) What do you mean by System Design?
- (g) What are various applications of System Simulation?
- (h) Discuss concept of probability functions.
- (i) What do you mean by GPSS?
- (j) What do you mean by Discrete System Simulation?