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Total No. of Questions : 09] **[Total No. of Pages : 01**

MCA (Sem. – 5th)

SYSTEM SIMULATION & MODELING

SUBJECT CODE : MCA – 504A (Elective – III)

Paper ID : [B0126]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours **Maximum Marks : 60**

Instruction to Candidates:

1) Attempt any one question from Sections **A , B, C & D**.
2) Section E is **Compulsory**.
3) Use of Non-programmable **Scientific Calculator** is allowed**.**

Section – A

(1 × 10 = 10)

Q1) What are continuous systems? Explain with help of example
Q2) What is meant by model? What are different types of model?

Section – B

(1 × 10 = 10)

Q3) Explain probability concepts in case of continuous simulation.
Q4) What are random numbers? Explain any one method of generating them.

Section – C

(1 × 10 = 10)

Q5) Discuss simulation of one server queue.
Q6) Explain with help of flowchart two server queue.

Section – D

(1 × 10 = 10)

Q7) Write a note on: Simulation of autopilot.
Q8) What is GPSS and what are its the features?

Section - E

Q9) ***(10 × 2 = 20)***

a) What is system analysis?
b) Define system simulation.
c) What are stochastic variables?
d) List applications of random numbers.
e) ontinuous and discrete systems. Differentiate between c
f) What is Monte Carlo Computation?
g) What is queue
h) Why is simulation needed?
i) List different methods for generating random numbers.
j) What are the various elements of queuing systems?

ion?