

B.Tech. (Sem. - 6th)
MODELING AND SIMULATION
SUBJECT CODE : PE - 304

Paper ID : [A0221]

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

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.
- 3) Attempt any **Two** questions from Section - C.

Section - A

Q1)

(10 x 2 = 20)

- a) What are measures of effectiveness?
- b) What is Cost analysis?
- c) What do you mean by System modeling?
- d) How simulation helps in time-to-market industry?
- e) What is the need for system modeling?
- f) Define feedback system & its application.
- g) What is the difference between analytical methods and simulation?
- h) What are discrete probability functions?
- i) Monte Carlo simulation is a special case of stochastic simulation?
Comment.
- j) Name any five blocks in GPSS?

Section - B

(4 x 5 = 20)

- Q2) Which are the major industries where simulation is used? Name any two-simulation softwares.
- Q3) Explain macro dynamic models in detail.
- Q4) Write short note on Statistical output analysis.
- Q5) Discuss various analytical methods in brief.
- Q6) What is the importance of system design and analysis in the Simulation of a system?

Section - C

(2 x 10 = 20)

- Q7) What is SIMSCRIPT? What is its importance? Discuss its various functions.
- Q8) How to formulate the model for a dynamic system?
- Q9) Explain analog computer simulation in detail.

