Simulation and Modeling:

UNIT-1

→ Types of model
→ Phases in simulation study.
→ Advantages and Disadvantages of simulation.
→ Define simulation. Explain dynamic physical model with example OR Analogy between mechanical and electrical system.

UNIT-2

→ Analog methods, Hybrid Simulation, Feedback Systems.
→ Methods for updating clock time.
→ Monte Carlo Simulation.

UNIT-3

→ Characteristics/Elements of queuing system.
→ Kendall's notation for queuing system.
→ Performance measures of (M/M/1) queuing system.
→ Numerical (5 marks) related with formulas of performance measures of (M/M/1) queuing system.

UNIT-4

→ Small easy chapter of 2-3 pages read all.

UNIT-5

→ Properties of random numbers.
→ Linear Congruential Method.
→ K-S test, Chi-Square test, Gap test, Auto Correlation test, Poker test.

UNIT-6

→ Model Building
→ Calibration and validation of Models [Including validation processes:
→ Face validity, Validation of model assumptions, Validating I/O Transformations].

UNIT-7

→ Simulation run statistics

UNIT-8

→ CSMP
→ GPSS Blocks
→ Creating GPSS model using GPSS blocks and GPSS program