

B.E. Seventh Semester (Information Technology) (CGS)
10752 : Elective-I : Modelling & Simulation : 7 IT 05

P. Pages : 2

Time : Three Hours



AU - 2923

Max. Marks : 80

- Notes :
1. Assume suitable data wherever necessary.
 2. Illustrate your answer necessary with the help of neat sketches.
 3. Use of pen Blue/Black ink/refill only for writing the answer book.

1. a) Compare the following? 7
 - i) Physical model and mathematical model.
 - ii) Static and dynamic model.
- b) What do you understand by system analysis, system design and system postulation? Explain each in brief. 7

OR

2. a) What do you mean by continuous and discrete system? Explain with suitable example in detail. 8
- b) Explain. 6
 - i) A corporate model.
 - ii) Production segment.
 - iii) Stochastic activity.
3. a) Explain Analog and Hybrid computer in brief. 8
- b) Compare Simulation and analytical methods. 5

OR

4. a) List out the various types of statements used in construction of CSMP III program and explain each in brief. 7
- b) Explain the following term. 6
 - i) Monte Carlo method.
 - ii) Distributed log model.
5. a) Explain the discrete probability function with suitable example. 6
- b) What is exponential Decay model? Explain with its equation. 7

OR

6. a) Explain the following term. 6
 - i) Probability density function.
 - ii) Rejection method.
 - iii) Cumulative distribution function.
- b) Explain exponential Growth model in detail. 7

7. a) Explain the following term. 8
i) Criticality index.
ii) Slack.
iii) Forward pass.
iv) Balking and reneging.
- b) Explain the analysis of activity n/w. 6

OR

8. Explain the simulation of two server queue with appropriate flowchart. 14
9. a) Explain the following term. 10
i) Exponential smoothing.
ii) Correlated sampling.
iii) Russian Roulette and splitting.
iv) Adaptive Forecasting.
- b) What is validation? 3

OR

10. List and explain different variance reduction techniques in detail. 13
11. a) What are the different categories of discrete system Simulation language? Explain. 7
- b) Compare and contrast GPSS and SIMSCRIPT 6

OR

12. a) Describe the block-structured continuous simulation languages. 7
- b) Explain FACILITY and STORAGE in detail. 6
