Code: 9A15601

R09

B.Tech III Year II Semester (R09) Supplementary Examinations May/June 2017
MATHEMATICAL MODELING & SIMULATION
(Computer Science & Systems Engineering)

Time: 3 hours   Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

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1   State general rules for converting any primal L.P.P into its dual.

2   (a)   Distinguish between transportation model and the assignment model.
    (b)   What is assignment problem explain?

3   Explain integer programming algorithm with an example.

4   (a)   Explain the basis of selective inventory control.
    (b)   State the different selection techniques adopted in inventory control system.

5   With respect to queuing theory, explain the following:
    (a)   Birth and death process.
    (b)   Role of exponential distribution.

6   (a)   Explain the role of state descriptor in discrete system simulation.
    (b)   Define the terms: (i) Discrete event. (ii) Simulation time. (iii) Clock time.
    (c)   Explain the representation of time in discrete system simulation.

7   Explain in detail about testing random number generators.

8   Explain the methodology for output analysis for single model. Mention precautions to be taken while doing output analysis.

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