

**R07****Code: R7311501**

B.Tech III Year I Semester (R07) Supplementary Examinations, May 2013

**OPTIMIZATION TECHNIQUES**

(Computer Science &amp; Systems Engineering)

Time: 3 hours

Max. Marks: 80

Answer any FIVE questions  
All questions carry equal marks

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- 1 What is an optimization? Explain classification of optimization problems.
- 2 (a) Write about single variable optimization.  
(b) Explain Kuhn-Tucker conditions with an example.
- 3 (a) What is motivation to simplex method?  
(b) Explain in detail about simplex algorithm.
- 4 (a) Explain north-west corner rule with a feasible solution.  
(b) What do you mean by transportation problem?
- 5 Explain about one-dimensional minimization methods.
- 6 Explain Powell's method and also its algorithm. With an example.
- 7 Explain two basic approaches of penalty function method.
- 8 (a) Explain about representation of a multistage decision process with an example.  
(b) Write an example for the calculus method of solution.

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