## NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

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NPTEL Video Course - Mathematics - NOC: Constrained and Unconstrained Optimization
Subject Co-ordinator - Dr. Debjani Chakraborty, Prof. A. Goswami
Co-ordinating Institute - IIT - Kharagpur
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Introduction to Optimization
Lecture 2 - Assumptions and Mathematical Modeling of LPP
Lecture 3 - Geometrey of LPP
Lecture 4 - Graphical Solution of LPP - I
Lecture 5 - Graphical Solution of LPP - II
Lecture 6 - Solution of LPP
Lecture 7 - Simplex Method
Lecture 8 - Introduction to BIG-M Method
Lecture 9 - Algorithm of BIG-M Method
Lecture 10 - Problems on BIG-M Method
Lecture 11 - Two Phase Method
Lecture 12 - Two Phase Method
Lecture 13 - Special Cases of LPP
Lecture 14 - Degeneracy in LPP
Lecture 15 - Sensitivity Analysis - I
Lecture 16 - Sensitivity Analysis - II
Lecture 17 - Problems on Sensitivity Analysis
Lecture 18 - Introduction to Duality Theory - I
Lecture 19 - Introduction to Duality Theory - II
Lecture 20 - Dual Simplex Method
Lecture 21 - Examples on Dual Simplex Method
Lecture 22 - Interger Linear Programming
Lecture 23 - Interger Linear Programming
Lecture 24 - TPP
Lecture 25 - Mixed Integer Programming Problem
Lecture 26
Lecture 27
Lecture 28
Lecture 29
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## NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

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Lecture 30
Lecture 31 - Introduction to Nonlinear programming
Lecture 32 - Graphical Solution of NLP
Lecture 33 - Types of NLP
Lecture 34 - One dimentional unconstrained optimization
Lecture 35 - Unconstrained Optimization
Lecture 36 - Region Elimination Technique - 1
Lecture 37 - Region Elimination Technique - 2
Lecture 38 - Region Elimination Technique - 3
Lecture 39 - Unconstrained Optimization
Lecture 40 - Unconstrained Optimization
Lecture 41 - Multivariate Unconstrained Optimization - 1
Lecture 42 - Multivariate Unconstrained Optimization - 2
Lecture 43 - Unconstrained Optimization
Lecture 44 - NLP with Equality Constrained - 1
Lecture 45 - NLP with Equality Constrained - 2
Lecture 46 - Constrained NLP - 1
Lecture 47 - Constrained NLP - 2
Lecture 48 - Constrained Optimization
Lecture 49 - Constrained Optimization
Lecture 50 - KKT
Lecture 51 - Constrained Optimization
Lecture 52 - Constrained Optimization
Lecture 53 - Feasible Direction
Lecture 54 - Penalty and barrier method
Lecture 55 - Penalty method
Lecture 56 - Penalty and barrier method
Lecture 57 - Penalty and barrier method
Lecture 58 - Dynamic programming
Lecture 59 - Multi-Objective decision making
Lecture 60 - Multi-Attribute decision making
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