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

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NPTEL Video Course - Mathematics - NOC: Differential Calculus in Several Variables
Subject Co-ordinator - Prof. Sudipta Dutta
Co-ordinating Institute - IIT - Kanpur
Sub-Titles - Available / Unavailable
                                        MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Introduction to Several Variables and Notion Of distance in Rn
Lecture 2 - Countinuity And Compactness
Lecture 3 - Countinuity And Connectdness
Lecture 4 - Derivatives
Lecture 5 - Matrix Of Linear Transformation
Lecture 6 - Examples for Differentiable function
Lecture 7 - Sufficient condition of differentiability
Lecture 8 - Chain Rule
Lecture 9 - Mean Value Theorem
Lecture 10 - Higher Order Derivatives
Lecture 11 - Taylor's Formula
Lecture 12 - Maximum And Minimum
Lecture 13 - Second derivative test for maximum, minimum and saddle point
Lecture 14 - We formalise the second derivative test discussed in Lecture 2 and do examples
Lecture 15 - Specialisation to functions of two variables
Lecture 16 - Implicit Function Theorem
Lecture 17 - Implicit Function Theorem -a
Lecture 18 - Application of IFT
Lecture 19 - Application of IFT
Lecture 20 - Application of IFT
Lecture 21 - Application of IFT
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