

Quiz - 19

Date _____

Page _____

Que What is Lagrangean multipliers and why it is needed?

Ans The method of Lagrange multipliers is a strategy for finding the local maxima and minima of a function subject to equality constraints.

The relationship between the gradient of the function and gradients of the constraints naturally leads to a reformulation of the original problem, known as the Lagrangian function.

The great advantages of this method is that it allows the optimization to be solved without explicit parameterization in terms of the constraints. As a result, the method of Lagrange multipliers is widely used to solve challenging constrained optimization problems, further, the method of Lagrange multipliers is generalized by the Karush-Kuhn-Tucker conditions, which can also take into account inequality constraints of the form $H(x) \leq c$ for a given constant c .