Problem from Jain Parag Nemichand

Minimize the weight W of axi-symmetric structure. Constraint functions are structural responses such as stress σ & the design variables are co-ordinates of selected points on structural contours. Use sequential linear programming (first order Taylor series expansion) and sensitivity analysis to solve this non-linear problem theoretically. Use isoparametric mapping and derivatives of co-ordinate with respect to natural co-ordinates ξ and η.
Carry out sensitivity analysis for weight and stiffness matrix.