NMSA403 Optimization Theory

Thematic rings for examination:

1. Separation of sets.
2. Farkas' theorem.
3. FONC and FOSC for a MP with convex objective function and convex set of feasible solutions.
4. FONC for a MP with concave objective function and convex set of feasible solutions.
5. FONC, FOSC, SONC, SOSC for a MP with differentiable objective function and an inner point of feasible solutions.
6. Saddle point condition and FOSC for a general NLP.
7. Saddle point condition and FONC for a general NLP.
8. Localized saddle point condition, FONC and FOSC for a general NLP.
9. Karush-Kuhn-Tucker optimality conditions, Basic theorem on KKT for a general NLP.
10. Karush-Kuhn-Tucker optimality conditions, Kuhn-Tucker constraint qualifications, FONC, FOSC for a general NLP.
11. Constraint qualifications and SOSC for a general NLP.

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Doc.RNDr. Petr Lachout, CSc.