UNIVERSITY OF BERGEN

Department of Informatics – Optimization group

Final exam – INF379: Metaheuristics

Spring 2018

Deadline: May 13, 2018, 23:59

Design and run a Metaheuristic of your choice to solve a Pickup and Delivery Problem with Time Windows (PDPTW) and test it with the attached instances. Collaboration with others is not allowed!

You are free to use classic components and/or to be creative in some parts (like operators) and design your own. Covering the main components of the selected Metaheuristic, creativity in the design, robustness of the algorithm, quality of the solutions, and having reasonable running time are the main assessment criteria.

You should send me a report (PDF file plus your codes) via Email. In the PDF file, you explain the main components and operators of your metaheuristic. You should also include the following tables and the best solution for each instance.

Instances #	Run#1	Run#2	…	Run#10

The initial solution should be outsourcing all the calls (not transporting any call).

Instances #	Initial Obj.	Average Obj.	Average Improvement (%)	Best Obj	Best Improvement (%)	Average time
			=100* (IO–AO)/IO		=100* (IO–BO)/IO	

Make sure you have correctly calculated the objective value and the feasibility of the solutions!
Running time on my PC to run all instances (with only one random seed) should be less than 20 minutes. You can check the running time on my PC during the exam period!

Good Luck!
Ahmad Hemmati