MGMTMSA 408 – Operations Analytics

Homework 1 – LP Duality and Revenue Management (Answer Sheet)

Name: _____ **UID:** _____

Note: Please submit your Python code on Canvas in order to receive full credit.
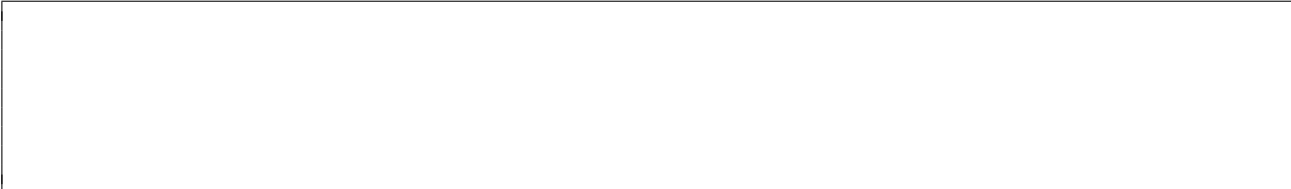
1 LP Duality

Part 1: LP Formulation

a)

b)

c)

Part 2: Dual Formulation

a)

b)

c)

d)

Part 3: Shadow Prices

a)

b)

c)

d)

e)

f)

g)

2 Cloud Computing

Part 1: Capacity control formulation

a)

b)

c)

d)

Part 2: Solving the capacity control problem in Python/Gurobi

a)

b)

Part 3: Simulating current practice

a)

b)

c)

d)

Part 4: A bid-price control policy

a)

b)

c)

d)