COMP3121 Social and Collaborative Computing

Homework 6

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Question 1

a)

Equilibrium: x = 500 (A-C-B), y = 500 (A-D-B)

Payoff for every driver: 17

If anyone deviates, his payoff will be: 501 / 100 + 12 > 17.

b)

Equilibrium: every driver chooses A-C-D-B (x = y = 1000)

Payoff for every driver: 20

If anyone deviates, his payoff will be 1000 / 100 + 12 > 20.

c)

Equilibrium: x = 500 (A-C-B), y = 500 (A-D-B)

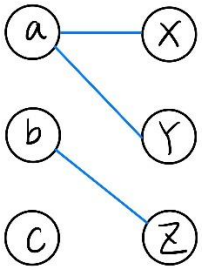
Payoff for every driver: 10

If anyone deviates, his payoff will be: 501 / 100 + 5 > 10

Question 2

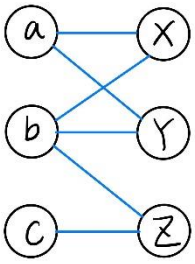
Answer: B, 1 set is market-clearing prices.

1. a = 0, b = 0, c = 0



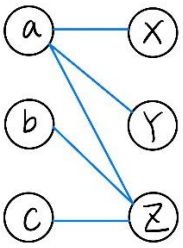
This set of prices is not market-clearing prices.

2. a= 2, b = 1, c = 0



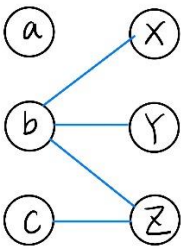
This set of prices is market-clearing prices

3. a= 0, b = 1, c = 0



This set of prices is not market-clearing prices.

4. a = 3, b = 1, c = 0



This set of prices is not market-clearing prices.

Then only 1 set is market-clearing prices, so the answer is B.