Exam
Advanced Microeconomics: Part II (Uwe Jirjahn)

Summer 2019

Choose <u>two questions</u> out of the three questions Q1, Q2, Q3.

Q.1 Player 1 and player 2 bargain over sharing 7000 dollars. The bargaining procedure follows the Rubinstein bargaining model. Player 1 makes the first offer. The discount factor of player 1 is given by $\delta_1 = 1/3$ and the discount factor of player 2 by $\delta_2 = 2/3$. Find the bargaining solution.

Q.2 Player 1 and player 2 bargain over sharing 600 dollars. The bargaining procedure follows the Rubinstein bargaining model. Player 1's share is

$$x_1^* = 600 \, \frac{1 - e^{-\Delta/7}}{1 - e^{-\Delta/7} e^{-5\Delta/7}}$$

where Δ is the time interval between subsequent periods. Calculate player 1's and player 2's share if Δ approaches zero.

Q.3 Player 1 and player 2 bargain over sharing 600 dollars. The utility function of player 1 is given by $U_1(x_1) = x_1$ where x_1 is player 1's share. The utility function of player 2 is given by $U_2(x_2) = x_2^{1/2}$ where x_2 is player 2's share. The disagreement points of both players are equal to zero. Find the Nash bargaining solution.

Note: If you answer all three questions, we will only consider Q.2 and Q.3.