

Exam
Advanced Microeconomics: Part II (Uwe Jirjahn)

Winter 23/24

Choose two questions out of the three questions Q1, Q2, Q3.

Q.1 Consider the following normal-form game:

Player 2	C	W
Player 1		
L	3, 2	-1, 3
R	-1, 1	0, 0

Q.1.a Identify the pure-strategy Nash equilibria.

Q.1.b Identify the mixed-strategy Nash equilibria.

Q.1.c Calculate each player's expected equilibrium payoff.

Q.2 In a sequential game, player 1 moves first. The normal form of the game is:

Player 2	CC	CW	WC	WW
Player 1				
L	3, 2	3, 2	1, 1	1, 1
R	1, 1	2, 3	1, 1	2, 3

Q.2.a Depict the extensive form.

Q.2.b Find the subgame-perfect Nash equilibrium.

Q.3 Nature determines whether the payoffs are as in Game 1 or in Game 2, each game being equally likely. Player 1 learns whether nature has drawn Game 1 or Game 2, but Player 2 does not.

Game 1

Player 2	L	R
Player 1		
T	1, 1	0, 0
B	0, 0	-1, 0

Game 2

Player 2	L	R
Player 1		
T	-1, 0	0, 0
B	0, 0	2, 2

Find the static Bayesian Nash equilibrium.

Note: If you answer all three questions, we will only consider Q.1 and Q.2.