

Your personal exam code:

Instructions

- The exam consists of 18 statements, of which some are true (correct) and some are false (wrong). We don't specify how many are true or false.
- The 18 statements are divided into groups, where each group has some background information that is common to all the statements in the group.
- Your exam score is calculated as follows. Correct answers (i.e, true statements marked as true, and false statements marked as false) are awarded 1 point. Wrong answers (i.e., true statements marked as false, and false statements marked as true) give 1 point deduction. Statements that you do not mark never give any points, positive or negative.
- The maximum score is +18 and the minimum is -18. You must be awarded at least +6 points to pass the exam. Your exam score contributes directly to your total course score that is used to calculate your grade on the course (i.e., the exam contributes at most 18 points to your course score).
- You may only use a pen or pencil and an eraser. Specifically, no electronic equipment, no books, and no notes are allowed.
- Feel free to make notes or calculations on the form or on the provided extra paper.

The form will be read by a machine. Please mark clearly with a pen or pencil.

Check:



Uncheck to correct:



1

Consider a two-player simultaneous action game, where Player 1 has actions A and B and Player 2 has actions c and d . The payoffs are given by

	c	d
A	$(0, 0)$	$(-1, 1)$
B	$(1, -1)$	$(0, 0)$

1.1 The pure-strategy profile (B, d) is a strict Nash equilibrium.

True False

1.2 The pure-strategy profile (A, c) is Pareto optimal.

True False

1.3 The game has exactly 4 action profiles.

True False

1.4 The minmax value for Player 2 is 0.

True False

2

Consider the infinitely repeated game with average payoffs where the simultaneous-action stage game (one-round game) is the game specified in question 1 above.

2.1 The repeated game has a Nash equilibrium with payoff profile $(-1/2, 1/2)$.

True False

2.2 The payoff profile $(1, 0)$ is feasible.

True False



3

Consider a two-player simultaneous action game where both players have actions A , B , C . The payoffs are given by

	A	B	C
A	(1, 1)	(0, 1)	(0, 0)
B	(1, 0)	(2, 2)	(0, 0)
C	(0, 0)	(0, 0)	(3, 3)

3.1 The pure-strategy profile (B, B) is a strict Nash equilibrium.

True False

3.2 The pure-strategy profile (A, A) is a weak Nash equilibrium.

True False

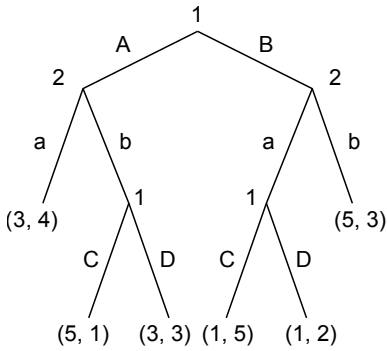
3.3 The game has exactly one mixed-strategy Nash equilibrium, i.e., where at least one player has a probability of an action strictly between 0 and 1.

True False



4

Consider the two-player game depicted below.



4.1 The game is written in extensive form.

- True False

4.2 This is a perfect information game.

- True False

4.3 Player 1 has no strictly dominated pure strategy.

- True False

4.4 There are exactly two subgame-perfect Nash equilibria.

- True False

4.5 All pure strategy profiles where Player 1 chooses action A are Pareto optimal.

- True False

4.6 Player 1 has exactly 4 pure strategies.

- True False

4.7 The game has exactly 32 pure strategy profiles.

- True False

4.8 The game has exactly 8 pure-strategy Nash equilibria.

- True False

4.9 All Pareto optimal pure-strategy profiles in this game are Nash equilibria.

- True False

