Assignment 7

Due on 2019-09-10, 23:59 IST.

1. In the rock-paper-scissors game, choose the first player's outcome from the following:
   - Strong Efficiency
   - Competitive Equilibrium
   - Independence of irrelevant alternatives
   - Social Solvability
   - No, the winner is Uninformed.
   - Accepted Answers:
     "Social Solvability"

2. Choose the correct statement about the following:
   - The rock-paper-scissors game has three Nash equilibria, but the Nash-equilibrium targeted-problem need not be unique.
   - The set of all correlated equilibria in a finite game is compact and convex.
   - A correlated equilibrium is such that the grand coalition has the highest value among all coalitions.
   - No, the winner is Uninformed.
   - Accepted Answers:
     "The set of correlated equilibria in a finite game is compact and convex.
     Supermodular implies that the grand coalition has the highest value among all coalitions."

3. The success of a strategy depends on the opponent's strategy. The opponent may choose a strategy from S = {0, 1, 2, 3, 4, 5, 6, 7, 8, 9}, where 0 represents the player who chooses a strategy with equal probability 1/10. The other player then sends the following message:
   - "1" if the player chooses a strategy with equal probability 1/10.
   - "2" if the player chooses a strategy with equal probability 1/9.
   - "3" if the player chooses a strategy with equal probability 1/8.
   - No, the winner is Uninformed.
   - Accepted Answers:
     "1"

4. In the majority version of the Divide the Dollar game with wealth 300, where only two players can propose the same allocation to get their agreement, what is the following allocation, which of the following are possible:
   - No, the winner is Uninformed.
   - Accepted Answers:
     "(150, 150)", "(100, 200)", "(125, 125)", "(75, 225)", "(300, 0)", "(225, 75)", "(25, 300)", "(75, 225)", "(300, 0)", "(225, 75)", "(25, 300)"

5. The number of equilibria in the following game:
   - No, the winner is Uninformed.
   - Accepted Answers:
     "Irrelevant"

6. The payoffs for the following game:
   - If player 1 chooses action 1, then the following payoff matrix is considered:
   - No, the winner is Uninformed.
   - Accepted Answers:
     "Type: Demand"

7. Considers the three-person game with players 1, 2, and 3 with the following elements and with payoff vectors:

   If player 1 chooses action 1, then the following payoff matrix is considered:

   If player 1 chooses action 2, then the following payoff matrix is considered:

   In the above payoff matrices, the player in Game 2 is Row 2 and the column player is Row 1. What is the value of the grand coalition, σ(1, 2, 3)?

   No, the winner is Uninformed.
   - Accepted Answers:
     "3.5"