



BUEC 311: Business Economics, Organization and Management

Pre-exam problem Set

Game Theory and Government Intervention

December 3, 2021

- 1) Market failures \_\_\_\_\_ and generate \_\_\_\_\_.
  - A) force governments to act; regulations
  - B) create monopolies or oligopolies; deadweight loss
  - C) reduce economic efficiency; deadweight loss
  - D) create deadweight loss; externalities
- 2) Which of the following is a dynamic game? **NOT COVERED in 2021**
  - A) Rock-paper-scissors
  - B) Craps (bet on a roll of the dice)
  - C) Chess
  - D) Rock-paper-scissors-lizard-Spock
- 3) In a repeated prisoners' dilemma type game where the static Nash equilibrium is worse than collaboration for both players
  - A) the players act sequentially.
  - B) the outcomes are the same as in a static prisoners' dilemma game.
  - C) firms' choices are not influenced by their opponents' actions.
  - D) cooperation may result if the game is played indefinitely.
- 4) In an indefinitely repeated game, a firm might use a \_\_\_\_\_ to \_\_\_\_\_ a rival that defects from a cooperative strategy.
  - A) trigger strategy; threaten
  - B) trigger strategy; punish
  - C) legal maneuver; sue
  - D) tacit threat; dissuade
- 5) If firms adopt a strategy that triggers a permanent punishment in a prisoner's dilemma game (the United vs American Airlines game we did in class, for example), the result in an indefinitely repeated game is
  - A) undefined.
  - B) the noncooperative Nash equilibrium.
  - C) the collusive Nash equilibrium.
  - D) economically inefficient.

- 6) A model of oligopoly in which one firm moves first, and then the other rivals follow is a \_\_\_\_\_ game. **NOT COVERED in 2021**
- A) Stackelberg model
  - B) Cournot model
  - C) finite move
  - D) tit-for-tat
- 7) The Cournot and Stackelberg models are similar, EXCEPT Cournot \_\_\_\_\_ and Stackelberg \_\_\_\_\_. **NOT COVERED in 2021**
- A) sets price; sets output
  - B) sets output; sets price
  - C) is dynamic; is static
  - D) is static; is dynamic
- 8) Which of the following statements is TRUE?
- A) A government policy that eliminates a market failure, but only some people gain while others are kept the same, is not a Pareto improvement.
  - B) A government policy that eliminates a market failure, but only some people gain while others are kept the same, is a Pareto improvement.
  - C) A government policy that eliminates a market failure and some people gain and some lose only a little, is a Pareto improvement.
  - D) A government policy that generates a Pareto improvement eliminates all deadweight loss.
- 9) Governments can eliminate market failure due to an imperfectly competitive market by
- A) changing the market structure, for example by eliminating monopoly protection.
  - B) having the government own the monopoly.
  - C) imposing regulations that reduce prices.
  - D) All of the above.
- 10) Optimal price regulation sets price equal to
- A) marginal cost.
  - B) average variable cost.
  - C) average cost.
  - D) minimum average cost.
- 11) In order to regulate a monopoly's price, the government **NOT COVERED in 2021**
- A) needs to hire former executives from the monopoly.
  - B) should rely on industry experts for information.
  - C) needs accurate information on the monopoly's demand and cost curves.
  - D) needs to know the monopoly's supply curve.
- 12) Government regulation in the market
- A) always increases consumer surplus.
  - B) always passes the cost-benefit test.
  - C) always solves market failures.
  - D) None of the above.

- 13) Regulation might NOT increase total surplus because
- A) the costs of the regulation might outweigh the benefits.
  - B) it may not be possible to gather the information necessary to set prices correctly.
  - C) regulators might get captured or influenced by the industry and set policies to benefit producers over consumers.
  - D) All of the above.
- 14) In general, an externality is created when
- A) people are affected (other than by changes in market prices) by a transaction which they were not part of.
  - B) firms produce a product of low quality and consumers don't like it.
  - C) firms have to pay for pollution the environment.
  - D) the government subsidizes education.
  - E) David Suzuki says so.
- 15) Students who talk loudly with each other in class
- A) create an externality because other students cannot follow the lecture as well.
  - B) disturb nobody.
  - C) benefit the other students in class because they engage in conversation.
  - D) only create an externality if they talk about something unrelated to class.
- 16) A game includes
- A) a strategy.
  - B) payoffs.
  - C) rules.
  - D) All of the above.
- 17) A strategy is dominant if
- A) it yields a greater payoff than any other player receives.
  - B) it yields a payoff at least as large as that from any other strategy, regardless of the actions of other players.
  - C) the player cannot gain by changing strategy, assuming that no other player changes strategy.
  - D) it is part of a Nash equilibrium.
- 18) One interesting feature of a prisoner's dilemma game (the United vs American Airlines game we did in class, for example) is that
- A) non-cooperative behavior leads to lower payoffs than cooperative behavior.
  - B) there is never a dominated strategy.
  - C) individuals behave irrationally when they behave non-cooperatively.
  - D) cooperative behavior leads to lower payoffs than non-cooperative behavior.
- 19) An auction in which the price announced by the auctioneer DESCENDS is called a(n) **NOT COVERED in 2021**
- A) Dutch Auction.
  - B) English Auction.
  - C) Sealed Bid Auction.
  - D) Descending Option Auction.

- 20) Assuming individuals follow their optimal bidding strategies, the individual with the highest valuation of the good will win in which of the following auctions? **NOT COVERED in 2021**
- A) English Auction
  - B) Dutch Auction
  - C) First-price Sealed Bid Auction
  - D) Second-price Sealed Bid Auction
  - E) All of the above.
- 21) In a second-price auction, the winner pays **NOT COVERED in 2021**
- A) the second-to-last bid it made.
  - B) the average of the top two bids.
  - C) the amount bid by the runner-up.
  - D) None of the above.
- 22) The winner's curse occurs when **NOT COVERED in 2021**
- A) bidders "shade" their bids.
  - B) the winning bid is higher than the good's common value.
  - C) the winner buys something he didn't need.
  - D) the winning bid is higher than the private value of the good.
- 23) It is unwise to bid more than your valuation of the good in a sealed bid second-price auction because **NOT COVERED in 2021**
- A) you will have to pay more than twice your valuation
  - B) you want to make sure you don't win
  - C) you might end up winning and paying more than the item is worth to you
  - D) you don't know what a second price auction is
- 24) Repeated games are conducive to
- A) explicit cooperation or collusion.
  - B) tacit cooperation or collusion.
  - C) corruption.
  - D) failing to have a Nash equilibrium.
- 25) In rock-paper-scissors, which of the following is a pure strategy Nash equilibrium:
- A) playing rock, because nothing beats rock
  - B) playing scissors, because most people play paper
  - C) playing paper, because your opponent likely thinks nothing beats rock
  - D) none of the above
- 25) In rock-paper-scissors-lizard-Spock (see next page), which of the following is a pure strategy Nash equilibrium:
- A) playing rock, because nothing beats rock
  - B) playing scissors, because most people play paper
  - C) playing paper, because your opponent likely thinks nothing beats rock
  - D) Logically, it has to be Spock.
  - E) None of the above

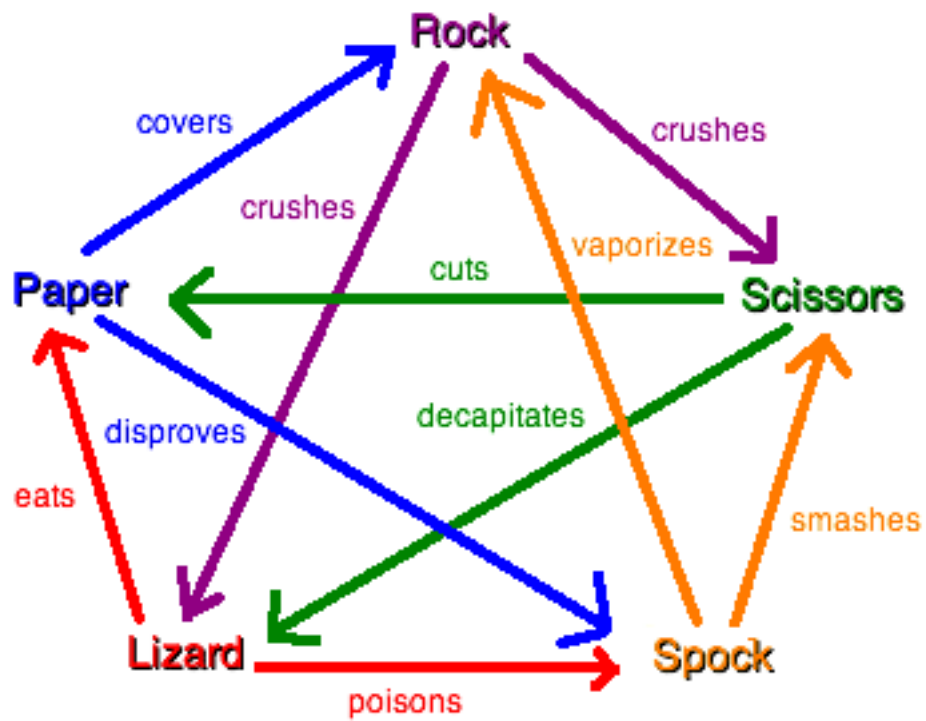


Figure 1: Rock-Paper-Scissors-Lizard-Spock