

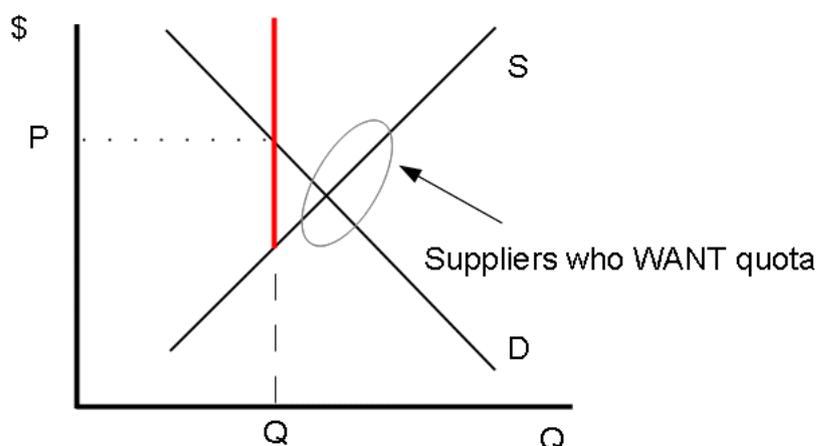
Name and Student ID: _____

Please use the space provided or back of the page. This final has 7 questions and 30 points (30 percent of course grade). I use “they” instead of s/he.

1. (5 points) The government puts a limit (quota) on sugar imports.
 - (a) (2 points) Draw supply and demand curves (indicating price and quantity) before and after the quota is set.

Solution:

Demand does not change, but supply “kinks up” at the quota quantity, resulting in a higher clearing price where it crosses the demand curve.



- (b) (3 points) Explain two ways for allocating quota among suppliers. Explain which is more efficient from an economic and social perspective, and explain why corrupt politicians might choose the other way?

Solution: Quota can be allocated to suppliers through an auction that raises costs (via the auction price for a permit to supply one unit of the good to the market) by enough that it's unprofitable for the less-efficient suppliers to participate in this market. (It's not important where auction revenues go.) An alternative allocation via lottery would give quota to the “wrong” suppliers, but they could resell their quota to cheaper providers (results are the same as auction, except lower government revenue).

The least-efficient way is for politicians to give quota to “friends” in exchange for lobbying favors that will – on average – absorb the extra profits they make from having the quota. (These lobbying costs make it harder to redistribute quota in a market because “lucky firms” are unwilling to accept prices that do not reward their lobbying efforts.) Politicians prefer to chose because they get power, attention and money (bribes).

2. (4 points) A public pool costs €4 to enter, but it's over crowded. Explain why and suggest *two* ways to make swimming more fun (i.e., reduce congestion), drawing from the definitions of public, private, common pool, and/or club goods.

Solution: The pool price is too low, resulting in overcrowding that turns a “club good” into a “common pool good” that is over-exploited (non-excludable and rival). One solution would “privatize” the pool by raising prices to exclude more people. Congestion-reducing changes to the “club rules” might include raising the price – or toll – for access to the club, limiting the number of swimmers to 30, or dividing swimmers into classes (kids, old people, etc.) The former raises the cash price of admission to the club, the latter, the time price.

3. (6 points) An individual maximizes utility; a price-taking firm maximizes profits.
- (a) (4 points) Describe how they find maximum utility and profits (respectively), in terms of marginal benefits and costs.

Solution: People wish to maximize their utility, subject to their budget constraint, which is determined by their income and the prices of the goods they want to consume. A firm wants to maximize its profits, subject to its cost function. Maximization of each objective is accomplished by consuming goods (or selling goods) until falling marginal benefits (happiness and revenues, respectively) meet rising marginal costs (spending and production costs, respectively).

- (b) (1 point) The government wants to “help” people and firms find their maximum utility and profits, respectively, given prices, income, etc. Comment.

Solution: The government cannot make such a policy, as outsiders cannot know how to maximize *your* utility. It is nearly as hard for an outsider to recommend ways to maximize profits, especially when the government (or bureaucrats) do not benefit from such maximization. A no-regrets policy would expose consumers and firms to the “true” costs and benefits of their actions, which government can do by pricing externalities, improving information flows, etc.

- (c) (1 point) Give a numeric example of how an individual responds when the price of a consumed good rises, assuming a price elasticity of -0.40.

Solution: The individual will consume less at a rate of a 4 percent drop in quantity for a 10 percent rise in price.

4. (4 points) You own a shoe store and are thinking of hiring your first employee. How would you compensate them? Does it matter if you are selling expensive or cheap shoes?

Solution: You can choose between an hourly (or annual) salary and commissions based on sales. A worker paid per hour does not care as much about customer

service as a worker paid on commission. In a cheap store, this does not matter so much because customers can find and buy their own shoes. In an expensive store, it helps to pay workers on commission because (1) they benefit from sales and (2) they will be eager to help the few customers who come to the store. Note that “overpaying” an employee is one strategy to overcome principal agent problems, as the agent knows that a slip up will cost them a great job (which many applicants are willing to take), so they try extra hard.

5. (4 points) The government of Problemstan wants to help the poor by subsidizing energy prices. Explain why this policy does not help the poor (as much as the rich) compared to an alternative policy (describe it), using the definition of budget constraint. Hint: draw a figure.

Solution: Energy subsidies lower the price of energy compared to other goods, thereby twisting and pushing out the budget constraint in the direction of using more energy. The poor consume less energy than the rich, so this policy will not help them as much as money, which shifts out the budget constraint for all goods and allows them to buy more of what they want to consume.

6. (3 points) List (with a short description) three costs and three benefits from going to graduate school. Explain how a decision to go to graduate school would be affected by an increase in one’s personal discount rate.

Solution: Benefits: Learning, professional connections, better job/salary. Costs: Time, money and risk of choosing the wrong specialization. A higher discount rate would put more weight on current costs and less weight on future benefits, lowering the probability of going to graduate school.

7. (4 points) Explain the importance of “transaction costs” (i.e., the cost of coordinating people and acquiring information) in Coase (“Nature of the Firm”) and Hayek (“Use of Knowledge in Society”). Provide two examples.

Solution: Coase says that a firm will internalize market functions when it is too expensive (TCs too high) to source goods or services in the market, e.g., hiring an accountant when the cost of working with an outside accountant is too high. Hayek argues that the transaction cost of acquiring information is too high for a centrally-planned economy. He favors prices as a means of transmitting signals of supply and demand that help market participants decide what to consume, produce, etc. at a lower TC. Gasoline prices, for example, help firms decide if they should look for more oil and consumers decide if they should drive more. A government program to “reduce driving” or “increase oil supplies” is not necessary

if prices are allowed to rise, to reflect scarcity or high demand, since consumers will choose to drive less when prices are high and firms will look for more expensive oil supplies when oil is hard to find.