

NAME:

SECTION (mark yours): 05 06

**EC 131 - Principles of Microeconomics
Fall 2011**

FINAL EXAM

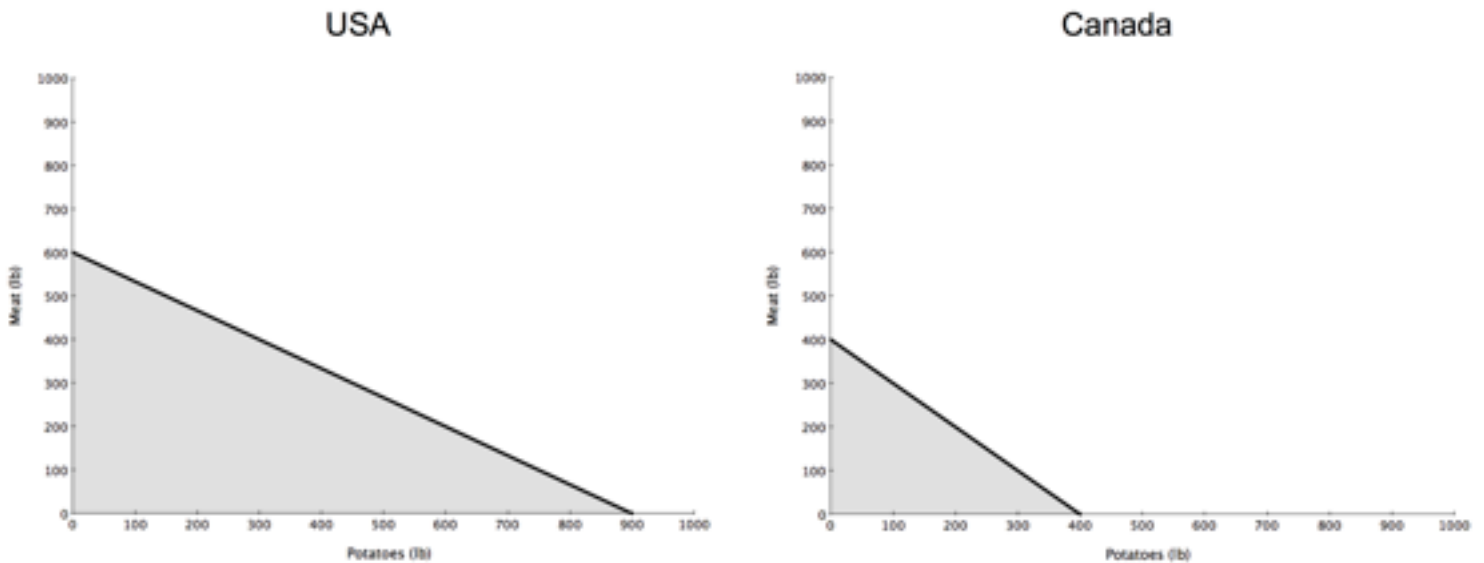
All questions should be answered in the following pages. Nothing here requires a very long answer. Graphs many times help, as does neatness.

You have 75 minutes to complete this exam. Mark **clearly** your answers for the multiple choice questions in their respective letters. If more than one alternative is marked you will not get any point from that question. You can use pencil, though if you do so you won't be able to dispute the grading for that question afterwards. **You MUST return this exam.** Each question clearly states how many points it is worth. The exam is worth 170 points.

The following definitions may be used throughout the exam:

AFC - Average Fixed Cost
AVC - Average Variable Cost
MC - Marginal Cost
MR - Marginal Revenue
Q - Quantity

Use your time wisely.



Consider the production possibilities frontiers below for questions 1 and 2:

Question 1 - (5 points) Mark the **correct** alternative:

- The USA has comparative advantage in producing both meat and potatoes when compared to Canada
- The USA has absolute advantage in producing both meat and potatoes when compared to Canada
- The USA will always choose to produce more potatoes than Canada
- In order to know which country has absolute advantage over the other on the production of potatoes we must first know the amount of input that is available in each country**

Question 2 - (5 points) Suppose that the USA and Canada trade meat and potatoes in a way that makes both better off. Mark the **correct** alternative:

- The USA will export potatoes and import meat from Canada**
- The USA will export meat and import potatoes from Canada
- The USA will export meat and potatoes to Canada
- The USA will import meat and potatoes from Canada

Consider the following table of willingness to pay (WTP) for an iPhone for questions 3 and 4:

| Name | WTP | Name | WTP |
|----------|-------|-----------|-------|
| Sinan | \$110 | Samson | \$130 |
| Bertan | \$170 | Chiu | \$220 |
| Giacomo | \$160 | Frederico | \$190 |
| Rossella | \$120 | Stacey | \$170 |
| Selen | \$210 | Meghan | \$170 |

Question 3 - (5 points) Suppose that the **cost of producing an iPhone is \$50 each (and that there's no fixed cost)**. Mark the **correct** alternative:

- If the retail price is set to \$150, the profit will be of \$ 300
- This table doesn't allow us to know the demand for when the price is \$ 50
- If Meghan buys the iPhone, then it must be the case that Selen will also buy it**
- Sinan, Rossella and Samson will buy the phone, as long as the price is above \$130

Question 4 - (15 points) Fill the following values, while still considering the **cost of producing an iPhone as \$50 each, with no fixed cost**:

| Price | Q | Total Revenue | Total Cost | Profit |
|-------|----|---------------|------------|--------|
| \$0 | 10 | 0 | 500 | -500 |
| \$50 | 10 | 500 | 500 | 0 |
| \$100 | 10 | 1000 | 500 | 500 |
| \$150 | 7 | 1050 | 350 | 700 |
| \$200 | 2 | 400 | 100 | 300 |

Question 5 - (5 points) Which of the following would **not** shift the demand curve for MP3 players?

- a. **A decrease in the price of MP3 players**
- b. A fad that makes MP3 players more popular among 12-25 years old
- c. An increase in the price of CDs, a complement for MP3 players
- d. A decrease in the price of satellite radio, a substitute for MP3 players

Question 6 - (5 points) Suppose that you enter a store and see that the price for a HI-FI sound system (a normal good) was reduced. Which of the following **cannot** be a combination of events that lead to that price change?

- a. The price of gold (an input in HI-FI systems) increases and the average consumers' income is reduced
- b. **The price of iPods (a substitute to HI-FI systems) increases and the number of firms producing HI-FI systems is reduced**
- c. The price of TVs (a substitute **in production** for HI-FI systems) is reduced
- d. There is an improvement in the technology for producing HI-FI systems and higher immigration flow increases the number of consumers

Question 7 - (5 points) The price elasticity of demand for bread:

- a. Is computed as the percentage change in quantity demanded of bread divided by the percentage change in price of bread
- b. Depends, in part, on the availability of close substitutes for bread
- c. Reflects the many economic, social, and psychological forces that influence consumers' tastes for bread
- d. **All of the above are correct**

Question 8 - (5 points) Suppose that you own the only source of water in your town (thus you're a **monopolist**) and you want to figure out which price to charge for the water. Luckily, you have absolutely no cost on that operation (that is, **ZERO fixed and ZERO variable costs**). You know for a fact that the **demand for water is a linear curve**. How should you choose the price that **maximizes profit**? (Hint: remember the relationship between elasticity and total revenue, and the value of the elasticity along a linear demand curve)

- a. You should set the price at the vertical intercept of the demand curve
- b. **You should set the price at the point where the demand elasticity equals 1**
- c. You should set the price at the point where the demand elasticity equals the marginal cost

- d. You should set the price at the point where elasticity equals zero

Question 9 - (5 points) The reason why we say that taxes levied on sellers and taxes levied on buyers are equivalent is that (mark the **correct** alternative):

- a. Regardless of who pays the tax, the tax burden will be divided in equal parts between the consumers and the sellers
- b. The price paid by the consumer will equal the price paid by the seller, regardless of who pays the tax
- c. **The quantity purchased, the after-tax expenditure and after-tax revenue is the same, regardless of who pays the tax**
- d. None of the above is correct

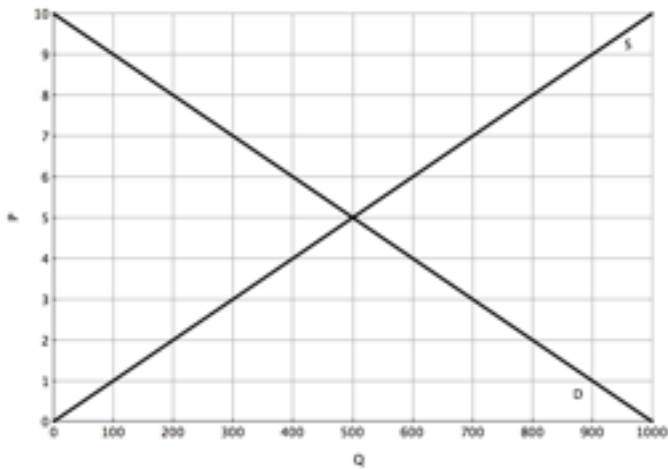
Question 10 - (5 points) We saw in class that even after the government of Bangladesh raised the minimum wage by 87%, the demand for workers at apparel factories was higher than the supply. Assume that the shortage of workers didn't change with that raise of the minimum wage. Which of the following alternatives **may** be one of the reasons for such shortage:

- a. The minimum wage was **non-binding before the raise**, and **now it's binding**
- b. **The current wage is below the equilibrium wage, but it's higher than the minimum wage before and after the raise.**
- c. The minimum wage was **non-binding before and after the raise** and thus the value of the wage before and after the raise is the **equilibrium wage**, which equals demand and supply
- d. The minimum wage was **binding before the raise**, but became **non-binding after it**

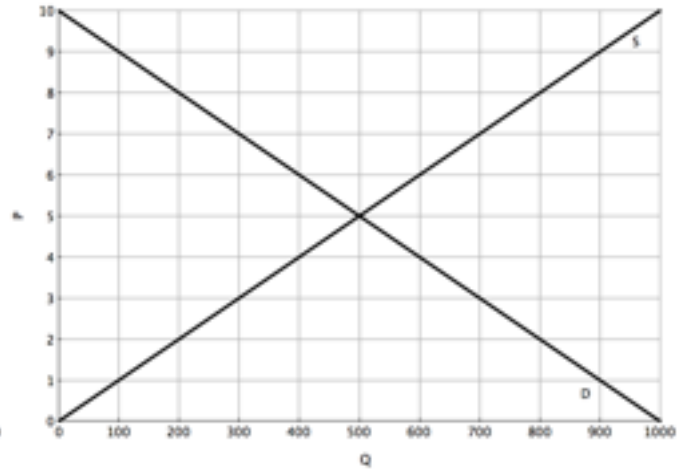
Use the graphs below to answer questions 11 to 14. Draw **clearly** and **unambiguously** the items required in each question over the correspondent graph.

The graphs below show the demand and supply curves for **corn** in the US, with prices in dollars and quantities in lb. All four graphs, thus, are copies of the same market. The

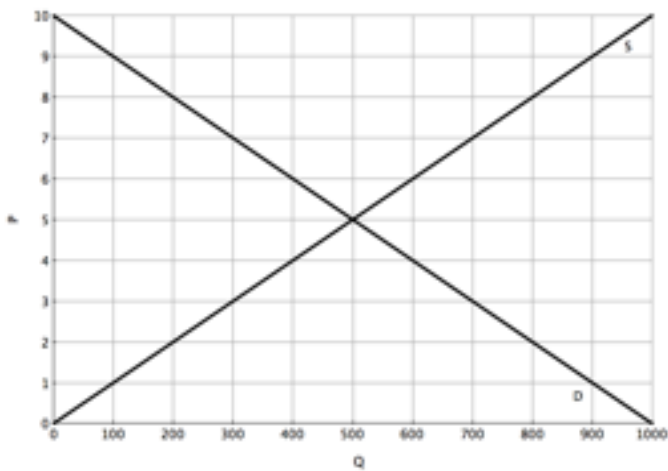
Question 11



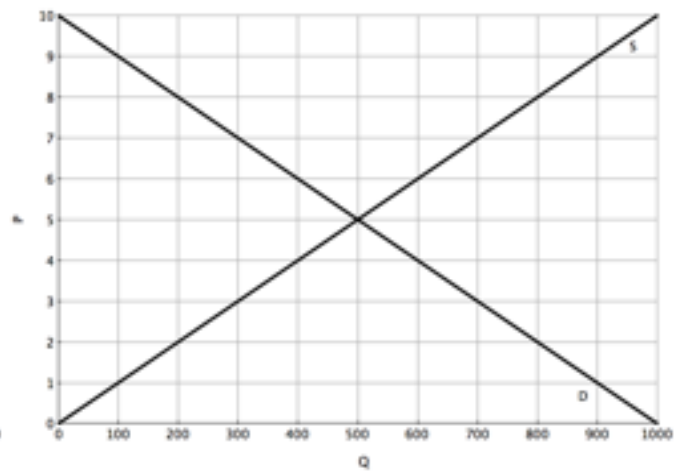
Question 12



Question 13



Question 14



policies and events described are not cumulative (that is, in question 11 there is a price ceiling and no tax, and on question 12 there is a tax but no price ceiling).

Question 11 - (5 points) Suppose that the government imposes a price ceiling of \$3/lb for the corn. Indicate **the price ceiling (Pc)**, the **equilibrium price (P*)**, the eventual **surplus/shortage** and/or **deadweight loss** due to that policy.

Question 12 - (5 points) Suppose the government imposes tax of \$4 per lb of corn sold, to be paid by the consumer. Indicate **the price paid by the consumer (Pc)**, the **price received by the firm (Ps)**, the **quantity sold**, the **tax revenue (TR)** and the eventual **deadweight loss** due to that policy.

Question 13 - (5 points) Suppose the country opens up for trade and the **world price for corn is \$7**. Indicate in the graph the **imports or exports** and the **welfare gains from trade**.

Question 14 - (5 points) Suppose the country opens up for trade, the **world price for corn is \$2** and the US decides to raise a **tariff** on corn imports of **\$1/lb imported**. Indicate in the graph the **imports after the tariff** and the **deadweight loss resulting from the tariff**.

Question 15 - (5 points) Which of the following statements is correct?

- Opportunity costs equal explicit minus implicit costs
- Economists consider opportunity costs to be included in a firm's total revenues.
- Economists consider opportunity costs to be included in a firm's costs of production**
- All of the above are correct

Question 16 - (5 points) Average total cost is usually very high **when a small amount of output is produced** because: (Mark the **correct** alternative)

- Average variable cost is high
- Average fixed cost is high**
- Marginal cost is high
- Marginal product is high

Question 17 - (5 points) Mark the item that is **NOT** a characteristic of every perfectly competitive market:

- a. Free entry
- b. **Zero profits in the short and long-run**
- c. Many sellers
- d. Firms are price-takers

Question 18 - (5 points) Mark the item that is **NOT** a characteristic of a monopolistically competitive market:

- a. Excess capacity
- b. **Barriers to entry**
- c. Many sellers
- d. $P > MC$

Question 19 - (5 points) There are two firms: firm A and firm B. **Firm A is in a perfectly competitive market**, and **firm B is in a monopolistically competitive market** (that is, they don't compete with each other). They have, however, the **same cost structure** (their ATC, AVC, AFC and MC curves are **identical**). Mark the **correct** alternative:

- a. In the long-run, firm A has zero profits, while firm B may have positive profits.
- b. In the short-run, firm A sets $MR = MC$, while firm B sets $MR > MC$
- c. **In the long-run, the quantity produced by firm A is higher than the quantity produced by firm B**
- d. None of the above is correct

Question 20 - (5 points) For a monopolist firm, the shape and position of the demand curve play a role in determining:

(i) the profit-maximizing price
 (ii) the shape and position of the marginal cost curve
 (iii) the shape and position of the marginal revenue curve

- a. (i) and (ii) only
- b. (ii) and (iii) only
- c. **(i) and (iii) only**
- d. (i), (ii) and (iii)

Question 21 - (5 points) Average wages in factories in China have been raising in the recent years. Which of the following effects **doesn't** help to explain such phenomenon?

- a. Migration from the countryside to the coast (where most of the factories are) is reducing
- b. Factories are being modernized with additional machines
- c. Wages in other areas as services and local commerce are increasing
- d. **The goods produced at those factories are being sold for a lower price**

Question 22 - (5 points) If the value of the marginal product of labor exceeds the wage, then the firm could:

- a. **Increase profit by hiring additional labor**
- b. Increase profit by reducing the amount of labor hired
- c. Increase revenue by lowering output
- d. Reduce total cost by hiring additional workers

Question 23 - (5 points) The Tragedy of the Commons happens when the good is:

- a. Rival and Excludable
- b. **Rival and Non-Excludable**
- c. Non-Rival and Excludable
- d. Non-Rival and Non-Excludable

Question 24 - (5 points) Keeping a beautiful garden is an example of an activity that generates **positive externalities**. We should then expect that, in the absence of any compensating measure to deal with such externalities:

- a. The price of gardening services is **higher** than the efficient price level, and the number of beautiful gardens is **higher** than the efficient level
- b. The price of gardening services is **lower** than the efficient price level, and the number of beautiful gardens is **higher** than the efficient level
- c. The price of gardening services is **higher** than the efficient price level, and the number of beautiful gardens is **lower** than the efficient level
- d. **The price of gardening services is lower than the efficient price level, and the number of beautiful gardens is lower than the efficient level**

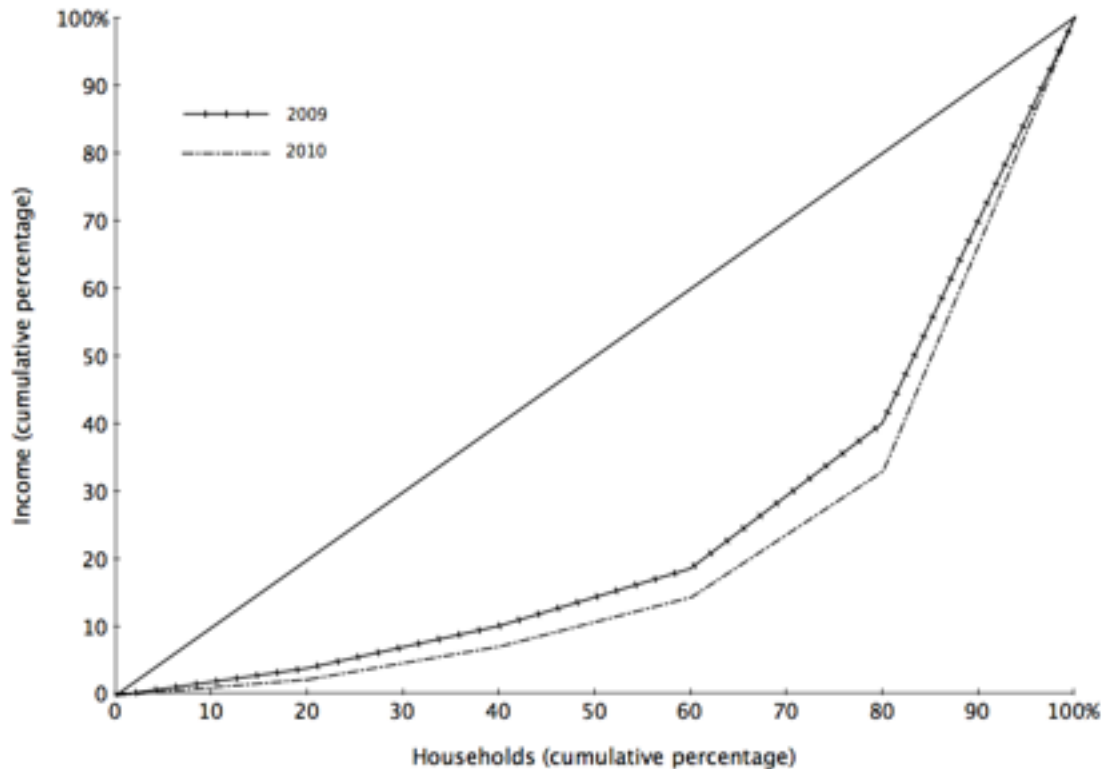
Question 25 - (5 points) Regarding the policy of **tradable pollution permits**, mark the **incorrect** alternative:

- a. The price by which they will trade the permits among themselves is not set by the government
- b. Firms that have higher costs of reducing pollution will sell most of their permits**
- c. Firms that have a lower costs of reducing pollution will only buy permits if they are cheaper than their own cost of reducing their pollution
- d. It allows for achieving the target amount of pollution at the lowest cost

Question 26 - (5 points) Which of the following is **not** a reason why government agencies subsidize basic research?

- a. The private market devotes too few resources to basic research
- b. The general knowledge developed through basic research can be used without charge
- c. The social benefit of additional knowledge is perceived to be greater than the cost of the subsidies
- d. By subsidizing basic research the government is turning it into a private good, solving then the Tragedy of the Commons problem**

The graph below shows the **Lorenz curve** graph for country A in 2009 and in 2010, as indicated by the different line styles. Use it to answer question 27.



Question 27 - (5 points) Regarding country A and the Lorenz curves shown above, mark the **correct** item:

- The top 20% households (in income) earned more than 50% of country A's total income in 2009**
- The Gini coefficient was greater in 2009 than in 2010
- Population was reduced between 2009 to 2010
- The top 60% households (in income) earned between 10% and 20% of country A's total income in 2009

Question 28 - (5 points) John thinks that the government should implement policies with the final objective of making **everybody equally wealthy**. Mary thinks that the government should focus on the **least wealthy people**, as the unemployed and the extremely poor. Which philosophies are more aligned with their thoughts?

- John's thoughts are similar to Utilitarianism, and Mary's, Liberalism**
- John's thoughts are similar to Libertarianism, and Mary's, Liberalism
- John's thoughts are similar to Utilitarianism, and Mary's, Libertarianism
- John's thoughts are similar to Libertarianism, and Mary's, Utilitarianism

For the following statements, say whether it is **true** or **false**, and then explain **briefly** why (if you write unrelated things and they are incorrect you may lose points!). Answers without explanations receive no points.

Question 29 - (5 points) A profit-maximizing firm in a monopolistically competitive market can earn positive, negative, or zero profits in the short run.

True. If the ATC curve is above the demand curve, profits are negative. If the demand function is the same as the one observed in the long-run, profits are zero. And if demand curve is below ATC curve, profits will be positive.

Question 30 - (5 points) Opening the economy for international trade is good for both consumers and producers.

False. If country exports, sellers are better off while consumers are worse off. If country imports, consumers are better off and sellers are worse off. Total surplus always increases, but there is also transfer of surplus from consumers to producers or vice-versa.

Question 31 - (5 points) Public goods would never be built if there were no governments.

False. If the value one individual gives to it is higher than its cost, that individual will provide the public good. Free riders aren't a problem to him, since the good is non-rival.

(Other answers can also be considered correct)

Question 32 - (5 points) There is no possible connection between the price of vacations in Cancun and an engineer salary in the US

False. There are many channels through which this may happen. The main ones are:

1 - The price of vacations in Cancun affects the cost/value relation of leisure, affecting thus the labor supply and then the wage.

2 - If vacations in Cancun are a normal good (which they probably are) then higher wage for an engineer can lead to higher income, which in turn may shift the demand for those vacations, increasing their price.

BONUS QUESTION - (Optional)

Choose a number between 0 and 100. If the difference between your number and half of the average number among all numbers given by the class is at most 5 you get an extra 10 points in this exam.

Example: Average number given by the class: 50. Half of the class average is 25. If your guess is between 20 and 30 you get **extra 5 points**.

Your number: