

CARLETON UNIVERSITY
Department of Economics
ECON 1000 V – Introduction to Economics
2015 Fall

INSTRUCTOR: SULTAN AHMED

ASSIGNMENT 1: Covers Chapters 1-6. Topics: *The Perspectives and Principles of Economics, Economists' way of thinking, Theories behind trading interdependence including comparative advantage, Fundamentals of supply and demand and application to government policies, Concept and application of Elasticity.*

There are three Sections: MCQs (section 1), Short free response questions (section 2) and longer free response questions (section 3). **TOTAL MARKS: 100**

The deadline to submit the answers **online** (through cuLearn) is **Oct 10** at the specified time (see course outline). This deadline will be strictly enforced.

GOOD LUCK!

PLEASE NOTE THE FOLLOWING

I assume that you have learnt by this time how cuLearn works. So be very sure to adhere to the deadline and also know how to post your work on the cuLearn. **If you are not sure about how to submit your work in one file and on the cuLearn, immediately seek help from the CCS or CUOL.**

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One of my TAs in an earlier term observed the following: Would you please take these comments/observations into consideration as you complete assignment 1?

- Some students took pictures of their assignments (or graphs), however some pictures were blurry and hard to read. It would be great if you could mention to the students that they need to be sure the TA can read it.
- Would you also be able to remind people to put all their answers in 1 file (some people used a zip file, with several files in that folder).
- Would you also be able to ask people to put their name either in the title of the document or at the top of the document - this would avoid having a possible mix up

SECTION 1: Multiple Choice (24 marks)

Identify the choice that best completes the statement or answers the question.

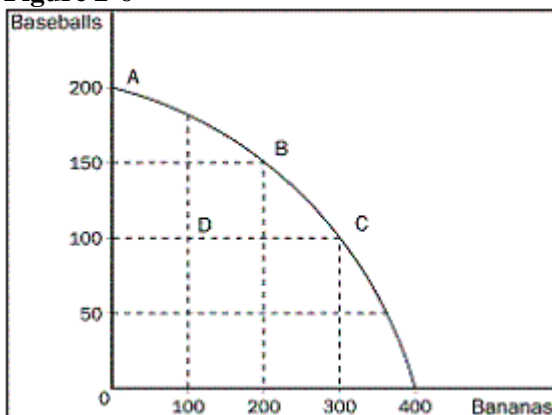
- ___ 1. Monica has spent \$30 000 purchasing and repairing an old cabin, which she expects to sell for \$40 000. She discovers that she needs an additional repair, which will cost \$20 000. She can sell the cabin as it is now for \$25 000. What should she do?
 - a. She should take the \$25 000.
 - b. She should never sell something for less than its cost.
 - c. She should complete the repairs and sell the cabin.
 - d. It doesn't matter which action she takes; the outcome is the same either way.

- ___ 2. How is the self-interest of the participants in an economy guided into promoting general economic self-interest?
 - a. by the invisible hand
 - b. by market power
 - c. by government intervention
 - d. by property rights

- ___ 3. What happened when the German government increased the quantity of money in the German economy in the 1920s?
 - a. Germany experienced hyperinflation.
 - b. Many people in Germany became rich.
 - c. Unemployment increased.
 - d. Germany was able to repay all its foreign debts.

- ___ 4. What are the four sectors in a more complex circular-flow diagram?
 - a. households, government, financial markets, and international trade
 - b. households, firms, government, and financial markets
 - c. households, firms, financial markets, and international trade
 - d. households, firms, government, and international trade

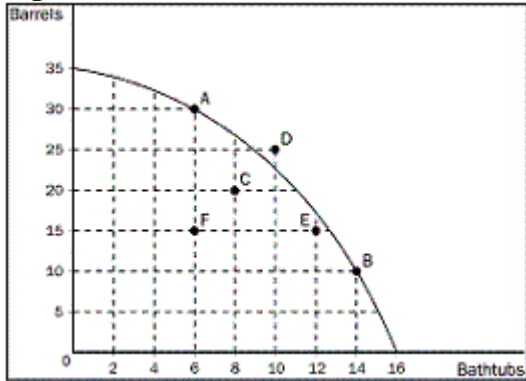
Figure 2-6



- ___ 5. Refer to Figure 2-6. What is the opportunity cost to society of moving from point B to point D?
 - a. 100 bananas and 100 baseballs
 - b. 50 bananas and 50 baseballs
 - c. 100 bananas and 50 baseballs

d. 50 bananas and 100 baseballs

Figure 2-8



- ___ 6. Refer to Figure 2-8. What is the opportunity cost of moving from point A to point B?
- 8 bathtubs
 - 20 barrels
 - the difference between the 8 bathtubs you get and the 20 barrels you give up
 - the difference between the 20 barrels you get and the 8 bathtubs you give up
- ___ 7. What two broad subfields is the field of economics traditionally divided into?
- national economics and international economics
 - consumer economics and producer economics
 - private sector economics and public sector economics
 - microeconomics and macroeconomics

Table 3-1

	Labour hours needed to make 1 kilogram:		Kilograms produced in 40 hours:	
	Meat	Potatoes	Meat	Potatoes
Farmer	8	2	5	20
Rancher	4	5	10	8

- ___ 8. Refer to Table 3-1. What is the opportunity cost of 1 kg of potatoes for the rancher?
- 4 hours of labour
 - 5 hours of labour
 - 5/4 kg of meat
 - 4/5 kg of meat

Table 3-2

	Labour hours needed to make 1 kilogram:		Kilograms produced in 40 hours:	
	Meat	Potatoes	Meat	Potatoes
Farmer	4	1	10	40
Rancher	4	5	10	8

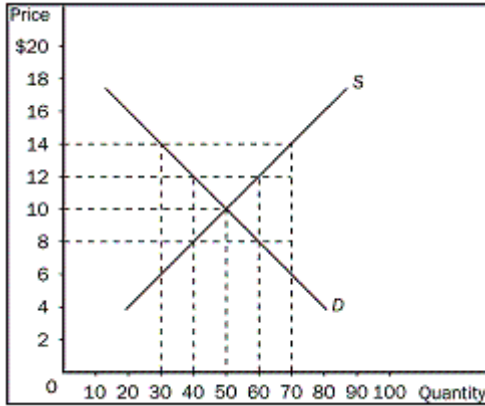
- ___ 9. Refer to Table 3-2. How could the farmer and rancher both benefit?
 - a. by the farmer specializing in meat and the rancher specializing in potatoes
 - b. by the farmer specializing in potatoes and the rancher specializing in meat
 - c. by the farmer specializing in neither good and the rancher specializing in both goods
 - d. by the farmer specializing in both goods and the rancher specializing in neither good
- ___ 10. Suppose a gardener produces both green beans and corn in her garden. If the opportunity cost of one bushel of corn is $\frac{3}{5}$ bushel of green beans, what is the opportunity cost of 1 bushel of green beans?
 - a. $\frac{2}{5}$ bushel of corn
 - b. $\frac{8}{5}$ bushels of corn
 - c. $\frac{5}{2}$ bushels of corn
 - d. $\frac{5}{3}$ bushels of corn
- ___ 11. For two people who are planning to trade two different goods, when will there NOT be a comparative advantage for either?
 - a. if they have exactly the same opportunity cost
 - b. if they have agreed in advance on who will produce what and how much each will produce
 - c. if the terms of trade are such that neither can gain from trade
 - d. if one person has an absolute advantage in both products

Table 3-6

	Labour hours needed to make one unit:		Amount produced in 40 hours:	
	Cheese	Bread	Cheese	Bread
England	1	2	40	20
Spain	2	8	20	5

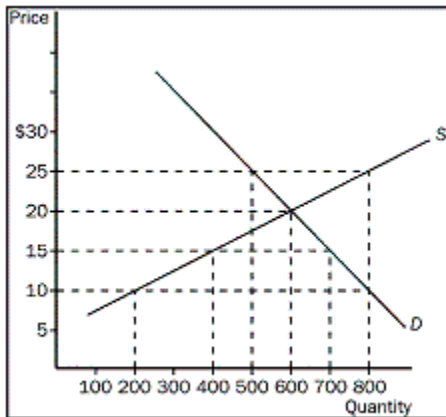
- ___ 12. Refer to Table 3-5. Which country has an absolute or comparative advantage in each product?
 - a. England has an absolute advantage in bread, and Spain has a comparative advantage in bread.
 - b. England has an absolute advantage in bread, and Spain has a comparative advantage in neither good.
 - c. England has an absolute advantage in cheese, and Spain has a comparative advantage in both goods.
 - d. England has an absolute advantage in both goods, and Spain has a comparative advantage in cheese.
- ___ 13. What is David Ricardo known for?
 - a. He opposed the Corn Laws as a member of the British Parliament.
 - b. He disputed Adam Smith's theory of specialization and trade in the early 1800s.
 - c. He advocated trade based on absolute advantage.
 - d. He was an early supporter of trade restrictions.

Figure 4-3



- ___ 14. Refer to the Figure 4-3. In this market, what are the equilibrium price and quantity?
- \$14 and 70
 - \$12 and 40
 - \$10 and 50
 - \$8 and 50

Figure 4-4



- ___ 15. Refer to the Figure 4-4. At a price of \$20, which of the following would happen?
- The price would decrease.
 - Both price and quantity would remain unchanged.
 - The quantity would increase.
 - The price would increase and the quantity would decrease.
- ___ 16. Market demand is given as $Q_d = 60 - P$. Market supply is given as $Q_s = 3P$. What would result if the market price were \$30?
- a shortage of 60
 - a surplus of 60
 - a surplus of 30
 - a shortage of 30
- ___ 17. What does a perfectly inelastic demand imply?
- Buyers decrease their purchases when the price rises.
 - Buyers purchase the same amount when the price rises or falls.

- c. Buyers increase their purchases only slightly when the price falls.
 - d. Buyers respond substantially to an increase in price.
- ___ 18. How does total revenue change as one moves down a linear demand curve?
- a. It increases.
 - b. It decreases.
 - c. It first increases then decreases.
 - d. It first decreases then increases.
- ___ 19. If you want to know how an increase in the price of ice cream at the next door Ice Cream Shoppe affects the demand for frozen yogurt in your shop, what would you compute?
- a. the price elasticity of demand
 - b. the income elasticity of demand
 - c. the cross-price elasticity of demand
 - d. the price elasticity of supply
- ___ 20. What does the price elasticity of supply measure?
- a. how responsive sellers are to a change in price
 - b. how responsive buyers are to a change in income
 - c. how responsive buyers are to a change in price
 - d. how responsive sellers are to a change in buyers' income
- ___ 21. Which of the following statements applies to a perfectly elastic supply curve?
- a. The elasticity of supply is 0.
 - b. The supply curve is vertical.
 - c. Very small changes in price lead to large changes in quantity supplied.
 - d. The firm would likely be operating in the short run.
- ___ 22. What do we know about price controls imposed by policymakers?
- a. They often hurt those they are trying to help.
 - b. They are designed to provide more stability in the market.
 - c. They allow the market to equate quantity demanded and quantity supplied.
 - d. They may improve market efficiency but may also cause greater inequity.
- ___ 23. If a tax is levied on the seller of a product, what will happen to the demand curve and the supply curve?
- a. Demand will not change and supply shifts to the left
 - b. Demand will not change and supply shifts to the right.
 - c. Demand shifts to the left and supply will not change.
 - d. Demand shifts to the right and supply will not change.
- ___ 24. On which side of the market does a tax burden fall most heavily?
- a. A tax burden falls most heavily on the side of the market that is more elastic.
 - b. A tax burden falls most heavily on the side of the market that is more inelastic.
 - c. A tax burden falls most heavily on the side of the market that is closer to unit elastic.
 - d. A tax burden falls most heavily on the side of the market that is closer to perfect elastic.

SECTION 2: SHORT FREE RESPONSE QUESTIONS. ANSWER ANY 5 QUESTIONS. TOTAL MARKS: 40 MARKS

INSTRUCTIONS: Your answers to the following questions should take advantage of the relevant economic tools, principles and perspectives. Your answers must be precise.

1. Define opportunity cost. What is the opportunity cost to you of attending university? What was your opportunity cost of coming to class today? 8 marks
2. Identify each of the following topics as being part of microeconomics or macroeconomics:
 - a. the impact of a change in consumer income on the purchase of luxury automobiles
 - b. the effect of a change in the price of Coke on the purchase of Pepsi
 - c. the impact of a war in the Middle East on the rate of inflation in Canada
 - d. factors influencing the rate of economic growth
 - e. factors influencing the demand for tractors
 - f. the impact of tax policy on national saving
 - g. the effect of pollution taxes on the Canadian copper industry
 - h. the degree of competition in the cable television industry
(8 marks)

3. This question deals with demand and supply and refers you to the table below.

- a. Given the table, graph the demand and supply curves for flashlights. Make certain to label equilibrium price and equilibrium quantity. 2 marks

Price	Quantity Demanded/Month	Quantity Supplied/Month
\$5	6,000	10,000
\$4	8,000	8,000
\$3	10,000	6,000
\$2	12,000	4,000
\$1	14,000	2,000

- b. What is the equilibrium price and equilibrium quantity? 2 marks
- c. Suppose the price is currently at \$5. What problem would exist in the economy? What would you expect to happen to price? Show this on your graph. 2 marks
- d. Suppose the price is currently \$2. What problem exists in the economy? What would you expect to happen to price? Show this on your graph. 2 marks

4. Company E, Canada’s largest ebook company, wants to increase its total revenue. One strategy is to offer a 15 percent discount on every ebook it sells. Company E knows that its customers can be divided into two distinct groups according to their likely responses to the discount. The accompanying table shows how the two groups respond to the discount.

	Group I (books per day)	Group II (books per day)
Sales before the discount	5000	4500
Sales after the discount	5400	5500

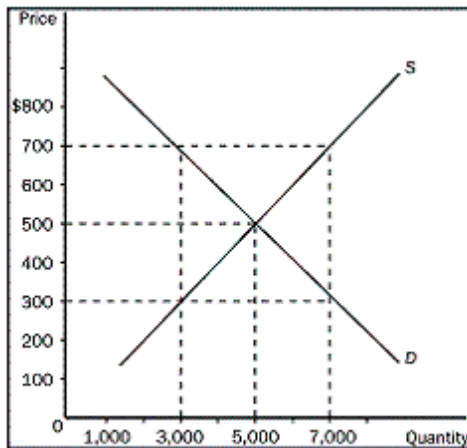
- a. Using the midpoint method, calculate the price elasticities of demand for group I and group II. 2 marks

- b. Explain how the discount will affect total revenue from each group. 2 marks
- c. Suppose Company E knows which group each customer belongs to when he logs on and can choose whether or not to offer the discount. If Company E wants to increase its total revenue, should discounts be offered to group I or to group II, to neither group, or to both groups? 4 marks

QUESTION 5 HAS TWO PARTS

- 5.1 What can you conclude about the price elasticity of demand in each of the following statements? 4 marks
 - a. “The duct cleaning business in this city is very competitive. I’d lose half my customers if I raised the price by as little as 10 percent.”
 - b. “My economics professor has chosen to use Mankiw’s textbook for this class, so I have no choice but to buy it.”
 - c. “I spend exactly \$10 on coffee every week.”
 - d. “Apple prices doubled this year since all flowers were killed in the frost in the spring; however, the total sales of apples are only decreased by 20 percent.”
- 5.2. According to a Ford press release on April 2013, sales of the fuel-efficient four-cylinder Ford Fusion rose by 4 percent in the first quarter from 2012 to 2013. Over the same period, according to data from National Resources Canada, the average price of regular gasoline rose from 118.9 cents per litre to 129.4 cents per litre. Using the midpoint method, calculate the cross-price elasticity of demand between the Ford Fusion and regular gasoline. According to your estimate of the cross-price elasticity, are the two goods gross complements or gross substitutes? Does your answer make sense? 4 marks

- 6.
 - a. Using the graph shown, analyze the effect a \$300 price ceiling would have on the market for 10-speed bicycles. Would this be a binding price ceiling? 3 marks
 - b. Using the graph shown, analyze the effect a \$700 price floor would have on this market. Would this be a binding price floor? 3 marks
 - c. Why would policymakers choose to impose a price ceiling or price floor? 2 marks



- 7. How does elasticity affect the burden of a tax? Justify your answer using supply and demand diagrams.

8. Using the equations shown below, answer the following questions.

$$Q^D = a - bP$$

$$Q^S = c + dP$$

- What is the equilibrium price and quantity in this market?
- Assuming a tax of T is imposed on the seller side, what is the equilibrium price and quantity after the tax?
- What is the effective price the sellers receive?

SECTION 3: LONGER FREE RESPONSE QUESTIONS. TOTAL MARKS: 36 MARKS.

QUESTION 1 IS COMPULSORY: TOTAL 20 MARKS

1-1 Here is a production possibilities table for war goods and civilian goods:

Type of Production	Production Alternatives				
	A	B	C	D	E
Automobiles	0	2	4	6	8
Rockets	30	27	21	12	0

- Show these data graphically. Upon what specific assumptions is this production possibilities curve based? 4 MARKS
 - If the economy is at point C, what is the cost of one more automobile? One more rocket? Explain how this curve reflects increasing opportunity costs. 3 MARKS
 - What must the economy do to operate at some point on the production possibilities curve? 3 MARKS
- 1-2 Label point G inside the production possibilities curve you have drawn for question 1.1. What does it indicate? Label point H outside the curve. What does this point indicate? What must occur before the economy can attain the level of production indicated by point H? 4 MARKS
- 1-3 Referring again to question 1.1, suppose improvement occurs in the technology of producing rockets but not in the production of automobiles. Draw the new production possibilities curve. Now assume that a technological advance occurs in producing automobiles but not in producing rockets. Draw the new production possibilities curve. Now draw a production possibilities curve that reflects technological improvement in the production of both products. 6 MARKS

ANSWER EITHER QUESTION 2 OR QUESTION 3: 16 MARKS

QUESTION 2 HAS THREE PARTS: 16 MARKS

- Q 2.1 In 1997, the Government of Ontario reformed that province's welfare system. The reform reduced the amount of welfare payments to a person with no income, but also allowed welfare recipients to keep a larger part of their welfare payments if they did earn some income.

- a. How does this reform affect the incentive to work? 4 MARKS
- b. How might this reform represent a trade-off between equity and efficiency? 4 MARKS

Q 2.2 Your roommate is a better cook than you are, but you can clean more quickly than your roommate can. If your roommate did all of the cooking and you did all of the cleaning, would your chores take you more or less time than if you divided each task evenly? Give a similar example of how specialization and trade can make two countries both better off. 4 MARKS

Q 2.3. A policy maker is deciding how to finance the construction of a new airport. He can either pay for it by increasing citizen's taxes or by printing more money. What are some of the short-run and long-run consequences of each option? 4 MARKS

Q 3. How will each of the following changes in demand and/or supply affect equilibrium price and equilibrium quantity in a competitive market; that is do price and quantity rise, fall, remain unchanged, or are the answers indeterminate, depending on the magnitudes of the shifts in supply and demand? **You MUST DRAW supply and demand diagrams to verify answers that price and quantity demanded and supplied go up, down or are indeterminate. (16 marks, 4 marks each):**

- a. Demand increases and supply increases.
- b. Supply increases and demand decreases.
- c. Demand increases and supply decreases.
- d. Demand decreases and supply decreases.