Eco100 (Wolfson) Practice Test #1

Duration of Test: 90 minutes

There are 6 questions of unequal value:

1.	Economic Issues and Concepts	6
3.	Elasticity; Markets in Action	16
2.	Supply and Demand	28
4.	Consumer Behavior	20
5.	Consumer Behavior	20
6.	Multiple Choice	10
	TOTAL	100

1. Economic Issues and Concepts (6 marks/Questions from 2000 & 2001)

a) In Utopia, the opportunity cost along its Production Possibility Frontier (PPF) is constant: 2 Blues for 1 White. The maximum blues that can be produced is 100. Draw Utopia's PPF.

b) In Utopia, the maximum Blues that can be produced is 100 units. The maximum Greens that can be produced is 200 units. As more Greens are produced, the opportunity cost rises. Draw Utopia's PPF.

2. Elasticity, Markets in Action (16 marks/Questions from 2001 and 2003)

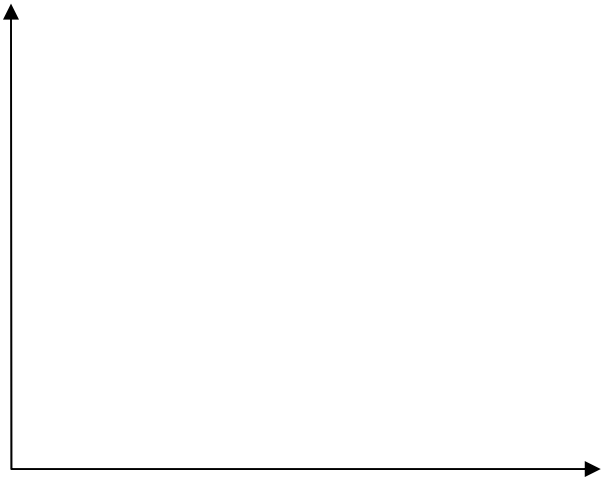
2.1 A demand schedule has the following equation: P*Q = 100 or P = 100/Q. Draw this demand schedule on a diagram showing any 2 points.

Along the D schedule, the price elasticity of demand **varies / stays constant / can't say**.

2.2 In October 2003, Nigeria lifted price controls on fuel (gas, diesel, kerosene). Nigeria had also instituted fuel subsidies in order to encourage supply. Here is a quote from the Economist magazine, 18 October 2003:

"The old system (of price control and subsidy) created shortages, cost at least $1B a year in subsidies, and discouraged the development of other energy sources such as natural gas."

a) Using a supply-demand diagram, demonstrate how the price control system created shortages of fuel. Assume negatively sloped Demand and positively sloped Supply. Consider a closed economy only.



b) Now use the diagram above to illustrate how the $1B subsidy influenced the market. (Assume it did not eliminate shortages).

c) Explain why the subsidy from government was needed.

d) Finally, explain why the price control system discouraged the development of alternative energy sources.

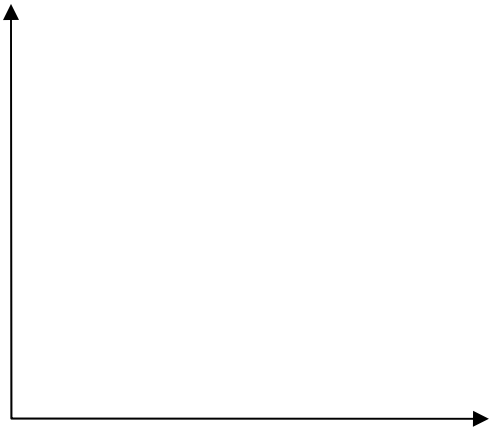
3. Supply and Demand (28 marks/Questions from 2000)

a) Consider the market for one-bedroom apartments in Posh, an exclusive suburb of Toronto. The annual rent is R and the number of apartments is X. Assume negatively sloped Demand and positively sloped Supply. Draw a diagram that shows the equilibrium, labeled as R_1 and X_1.

b) Predict the likely effect of the following events, taken separately, on the equilibrium rental price and quantity in Posh. In each case, show the original equilibrium first and the then the new equilibrium. Provide a brief explanation of your answer (what has changed and why)

i. A property developer knocks down a row of shops on the main street of Posh and converts them into 1 bedroom rental apartments.

ii. The price of new condominiums falls, making it much more affordable to buy 1 bedroom apartments (i.e. home ownership becomes cheaper)



c) An economist has determined that the initial demand and supply schedules for one-bedroom rental housing in Posh are:

Demand: $R = 16{,}400 - 40X$ Supply: $R = 10{,}000 + 24X$

Calculate the following values at the initial equilibrium:

Item	Value at Equilibrium
Rental rate (R)	
Number of apartments (X)	
Consumer Surplus	
Price elasticity of demand	

d) Draw a free-hand diagram that shows the initial equilibrium. Be sure to label the axis and show the intercepts and equilibrium values. Show the area that corresponds to consumer surplus.

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e) Suppose that the city council sets up a 'Rental Board', which is to be responsible for regulating the rental price of 1-bedroom apartments in Posh. The Board is thinking about setting a rental price ceiling of $11,080. In a free hand diagram, describe what will happen to the market if the price ceiling is successfully imposed. Provide a brief explanation.

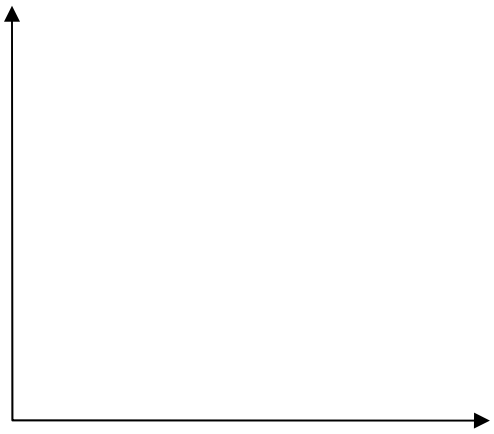
f) Use the following table to show values associated with your answer:

Item	Value under effective controls
Rental Rate (R)	
Quantity of apartments demanded	
Quantity of apartments supplied	
Equilibrium quantity of apts.	

g) Will all consumers be affected in the same way by the controls? **Yes / No**
Explain your answer.

4. Consumer Behavior (20 marks/Questions from 2002)
Anna loves to eat fish. She spends all of her income ($150) on Cod (X-axis) and Haddock (Y-axis). The prices of C and H are $15 and $10 respectively. In the initial equilibrium, Anna consumes 6 Cod and 6 Haddock.

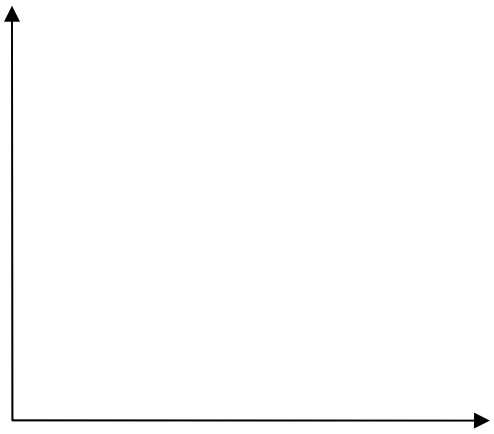
a) Using indifference theory, show her initial equilibrium in the diagram below. Label the equilibrium point as A.



b) Redraw the initial equilibrium in the diagram below. Now the price of cod rises. It is known that Anna's income effect (IE) and substitution effect (SE) work in opposite directions, and that the SE is greater than the IE. Show her new equilibrium, labeled point B, on the diagram. Separate the change in the quantity of cod consumed into SE and IE. Be sure to show the direction of change for both effects.

c) From the above diagram, I conclude that:
Cod is a **normal good / inferior good / Giffen good / delicious good**
Haddock is a **normal good / inferior good / Giffen good / delicious good**

d) In the space below, develop the Income Consumption Curve (ICC) for Cod, based on the information in the above parts. You need only show two points related to the previous steps on the ICC. Be sure to label the axes.



e) In the diagram below, develop the demand schedule for Cod. Once again, you need only show two points related to your previous work on the D schedule. Label the axes.

5. More Consumer Behavior (20 marks/Questions from 1999)

a) Lori the Lawyer can freely vary the number of hours she works. She earns $200 per hour. She has decided to work 10 hours every day. Below, show Lori's equilibrium on a standard indifference diagram. (Be sure to label the axes, and to show the number of hours worked and the number of hours spent not working).

b) Now suppose that the Lawyers' Professional Association requires Lori to provide 10% of the hours worked as free service to needy people who require legal counsel. In the space below, redraw your initial equilibrium from above. Now analyze how many hours of paid service Lori will undertake if she must donate 10% of her time. (For ease of exposition, assume that donating time is equivalent to a 10% cut in the hourly fee).

Lori will work **(more/less/more or less)**. My diagram and explanation follows: (You need not show Income and Substitution Effects in the diagram, but you need to discuss them in your answer: assume leisure is a normal good).

c) It turns out that Lori has decided to work only 9 hours per day, so that her daily donation in money terms turns out to be $200. Lori and many other lawyers like her petition the Professional Association to revise the method of helping needy people. These lawyers ask that they be required to donate $200, rather than give "free time". Once again, redraw your original equilibrium in the space below. Now analyze this option of donating money instead of time, in terms of the work decision Lori makes. Assume that Leisure is a normal good.

In comparison to the 10 hours initially worked. Lori will (**work more/ work less/ more or less**) if she is required to donate $200 per day. Provide a brief explanation.

6. Multiple Choice (10 marks/Questions from 2000-2003)

1. (2000) Consider a production possibility frontier (PPF) that plots industrial production (X axis) and agricultural production (Y axis). Technological progress in the agricultural world would:

   a) cause the PPF to move outward, but not in a parallel fashion
   b) cause the PPF to move inwards, but not in a parallel fashion
   c) have no effect on the PPF
   d) cause the PPF to move outwards parallel to itself

2. (2002) An increase in the price of cola will:

   a) increase the price of coffee and increase the quantity demanded of coffee
   b) increase the price of coffee and increase the quantity supplied of coffee
   c) decrease the price of coffee and decrease the quantity demanded of coffee
   d) decrease the price of coffee and decrease the quantity supplied of coffee
   e) cause none of the above

3. (2003) If demand is relatively inelastic*, an increase in price will cause total expenditures to:

   a) increase
   b) remain constant
   c) decrease
   d) all to zero
   e) do any of the above; without a precise value for E_D*, we can't say.

   * This term refers to the price elasticity of demand.

4. (2002) The government of a country has been accumulating butter, cheese, eggs and milk. These surpluses are consistent with:

   a) floor prices for agricultural products that are below market prices
   b) floor prices for agricultural products that are above market prices
   c) ceiling prices for agricultural products that are below market prices
   d) ceiling prices for agricultural products that are above market prices
   e) quotas for agricultural products

5. (2001) Suppose you are consuming hot dogs and cokes and that you are maximizing total satisfaction for the meal budget available to you of $6. The price of a hot dog is $1 and the price of a coke is $1 too. Which of the following can we conclude?

   a) The total utility of hot dogs is being maximized
   b) The marginal utility of hot dogs and cokes divided by the quantity of each good consumed must be equal
   c) The total utility from hot dogs must equal the total utility from cokes
   d) You are purchasing 3 hot dogs and 3 cokes
   e) The marginal utility of hot dogs must equal the marginal utility of cokes

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