

Name: _____

Student #: _____

QUEEN'S UNIVERSITY AT KINGSTON

FACULTY OF ARTS AND SCIENCE

Department of Economics

ECONOMICS 110A/111

Mid-Year/Final Examination

Econ 110A Sections 001 & 002 – Prof Ian Cromb

Econ 111 Section 001 – Prof Ugurhan Berkok

December 7, 2018

INSTRUCTIONS TO STUDENTS:

This examination is 3 HOURS in length.

There are 6 sections to this examination.

This exam is printed on both sides of the page.

Mark your selections in PENCIL on the Answer Sheet. Fill in the appropriate rectangle completely, but stay within its limits. There is only one correct answer for each question; multiple answers will be marked as incorrect. If you make changes, be sure to erase completely.

Before you begin the exam please record your *Student Number*, *Name*, and *Test Form A* in the appropriate sections of the Answer Sheet. For detailed instructions on filling in this information see the back of this page.

<p>The following aids are allowed: Casio FX-991 calculator</p>

PLEASE NOTE:

Proctors are unable to respond to queries about the interpretation of exam questions.

Do your best to answer exam questions as written.

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Before You Begin the Exam:

1. Write your Student # under “**I.D. Number**” on the Answer Sheet and fill in the appropriate rectangle below each number. See example below.
2. Print your **Last Name** followed by first name in the appropriate space, and fill in the appropriate rectangle under each letter. (If your name is too long to fit in the spaces provided, please enter as many letters as you can.) See example below.
3. Under “**Test Form**”, fill in “**A**”. See example below.

I.D. NUMBER										DO NOT MARK IN THIS AREA	TEST FORM A B C D
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LAST NAME										FIRST NAME										CODE	
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A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A			
B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C			
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H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H			
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Part A [40 marks]

This section consists of 40 questions that survey the course material.

Answer all 40 questions; each question is worth 1 mark.

1) Scarcity is likely to be

- A) a problem that will be solved by the proper use of available resources.
- B) unique to the twentieth century.
- C) a problem that will always exist.
- D) a result of the work ethic.
- E) eliminated with a better understanding of economics.

The diagram below shows two production possibilities boundaries for Country X.

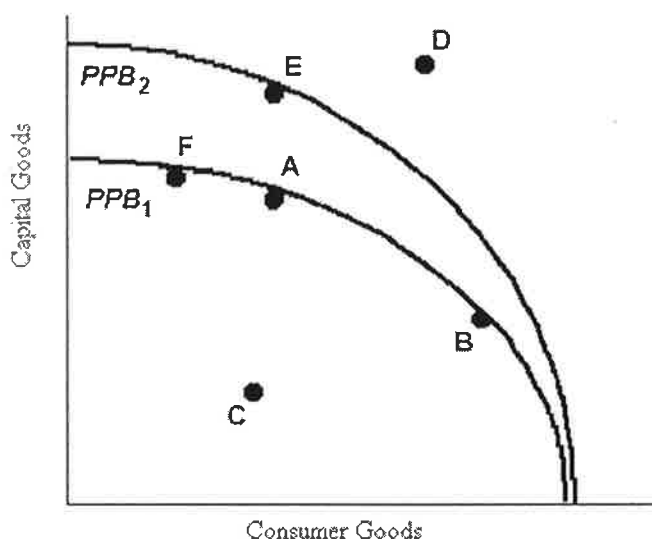


FIGURE 1-2

2) Refer to Figure 1-2 and assume an economy faces PPB₁. At point B,

- A) the price of capital goods is higher than the price of consumption goods.
- B) Country X is producing too many consumption goods and too few capital goods.
- C) the price of consumption goods is equal to the price of capital goods.
- D) the opportunity cost of producing an extra unit of capital goods is higher than at point A.
- E) the opportunity cost of producing an extra unit of consumption goods is higher than at point A.

3) Which of the following statements belongs more properly in the field of normative economics than positive economics?

- A) An increase in the minimum wage leads to more unemployment.
- B) The price of one Canadian dollar is \$0.85 U.S.
- C) When a drought occurs, the price of vegetables tends to rise.
- D) Canadian governments should provide assistance to the auto industry.
- E) Technological change has reduced the cost of cell phone service.

- 4) Consider two countries that can produce rice and other products. If neither country has an absolute advantage in the production of rice,
- A) there is no possibility that either country will import rice from the other.
 - B) neither country can possibly have a comparative advantage in the production of rice.
 - C) rice will still be traded as long as one of the countries has a comparative advantage in its production.
 - D) the opportunity cost of producing rice must be identical in the two countries.
 - E) then rice should not be produced.

This table shows how much cotton and cocoa can be produced in Peru and Brazil with one unit of equivalent resources.

	Cotton (bales)	Cocoa Beans (bushels)
	2	4
	1	6

TABLE 33-4

- 5) Refer to Table 33-4. Compared with Peru, Brazil has
- A) a comparative but not absolute advantage in the production of cocoa beans .
 - B) an absolute and a comparative advantage in the production of cocoa beans.
 - C) an absolute, but not a comparative, advantage in the production of cocoa beans
 - D) an absolute advantage in the production of cotton.
 - E) an absolute and a comparative advantage in the production of cotton.
- 6) An important assumption underlying a demand schedule is that
- A) quantity demanded and demand mean the same thing.
 - B) everything else except the product's price is being held constant.
 - C) the numbers are not important; the general relationship between the variables is.
 - D) household tastes rarely change.
 - E) income has little significance to household demand.

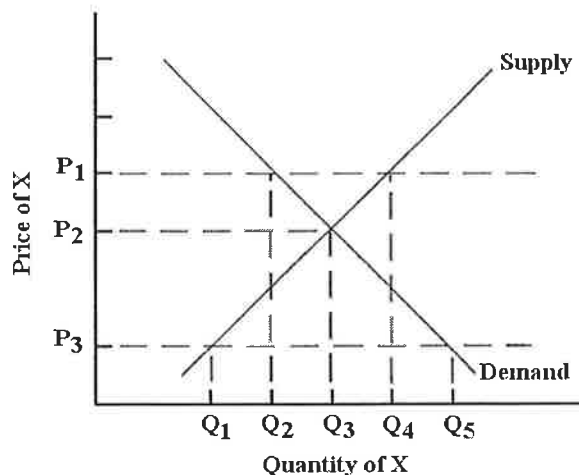


FIGURE 3-3

7) Refer to Figure 3-3. At a price of P_1 there would be excess supply equal to

- A) 0 B) $Q_1 - Q_5$ C) $Q_2 - Q_4$ D) $Q_1 - Q_2$ E) $Q_4 - Q_2$

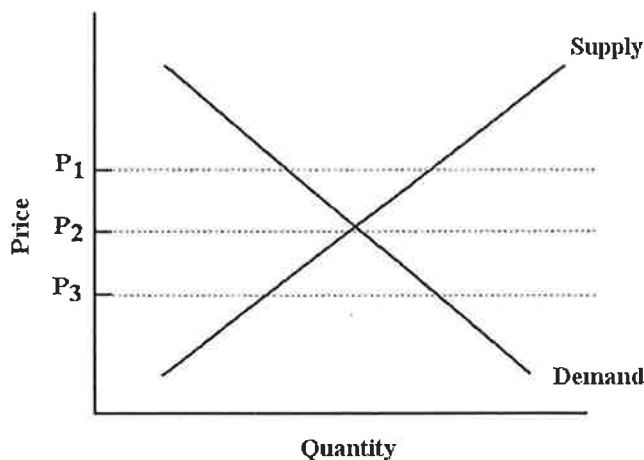


FIGURE 3-5

8) Refer to Figure 3-5. If supply and demand were to increase simultaneously, this would lead to

- A) an increase in P and in Q .
 B) a decrease in P and in Q .
 C) an increase in Q and an indeterminate change in P .
 D) an increase in P and an indeterminate change in Q .
 E) no change in P or Q .

9) Aeronautical engineers are a factor of production for airplanes. What will happen in the world market for airplanes when there is a worldwide shortage of aeronautical engineers?

- A) price will increase, quantity exchanged will decrease
 B) price will increase, quantity exchanged will increase
 C) price will decrease, quantity exchanged will decrease
 D) price will decrease, quantity exchanged will increase
 E) there will be no change in price or quantity exchanged

- 10) Suppose that the quantity of lemonade demanded falls from 103 000 litres per week to 97 000 litres per week as a result of a 10 percent increase in its price. The price elasticity of demand for lemonade is therefore
- A) 0.6.
 - B) 6.0.
 - C) 1.97.
 - D) 1.03.
 - E) impossible to compute unless we know the before and after prices.

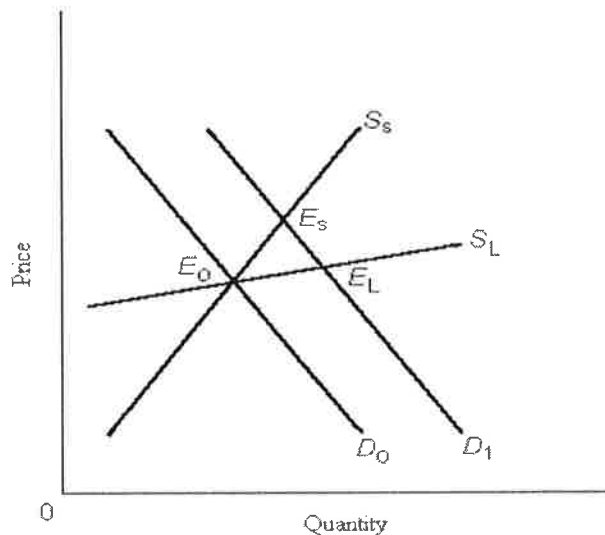


FIGURE 4-3

- 11) Refer to Figure 4-3, which shows a demand shift and the short-run and long-run supply curves for some product. In the new long-run equilibrium at E_L , producers' revenue
- A) is unambiguously lower than at E_S .
 - B) could be higher or lower than at E_S , depending on the price elasticity of demand.
 - C) is unambiguously lower than at E_0 .
 - D) could be higher or lower than at E_0 , depending on the price elasticity of demand.
 - E) is unambiguously higher than at E_S .
- 12) The price elasticity of demand for a product tends to be greater the
- A) lower its price.
 - B) more broadly the product is defined.
 - C) fewer close substitutes for it there are.
 - D) more close substitutes for it there are.
 - E) shorter the time span being considered.
- 13) Producers will bear a larger burden of a sales tax if
- A) demand is relatively elastic and supply is relatively inelastic.
 - B) demand is relatively inelastic and supply is relatively elastic.
 - C) both demand and supply are relatively inelastic.
 - D) both demand and supply are relatively elastic.
 - E) the tax is collected by firms rather than remitted directly to the government by consumers.

- 14) If Vicky's income increases by 8% and she increases her consumption of music downloads by 4%, then her income elasticity of demand for music downloads is
A) 4.0. B) -0.5. C) -2.0. D) 2.0. E) 0.5.
- 15) Consider the market for iron ore, an important industrial input. Suppose the government sets a price floor below the free-market equilibrium price. The result will be
A) a continuation of the free-market equilibrium price and quantity.
B) the quantity demanded will exceed quantity supplied and there will be a shortage in the market.
C) the quantity supplied will exceed quantity demanded and there will be a surplus in the market.
D) a new free-market equilibrium at a lower price and higher output level.
E) increased government revenue.
- 16) The shortage of housing that exists in the presence of binding rent controls is smaller
A) the higher is the elasticity of demand for housing.
B) the lower is the elasticity of supply of housing.
C) the longer is the length of time the rent controls are in place.
D) the greater is the difference between the equilibrium price and the rent-controlled price.
E) the more elastic is the long-run supply of housing.
- 17) An equal proportional increase in money income and all money prices will
A) shift the budget line to the left parallel to the original budget line.
B) shift the budget line to the right parallel to the original budget line.
C) leave the position of the budget line unchanged.
D) rotate the budget line inward from the vertical axis.
E) rotate the budget line inward from the horizontal axis.
- 18) Suppose there are only two goods, A and B, and that consumer income is constant. If the price of good A falls and the consumption of good B rises, we can conclude that
A) A is a normal good.
B) B is a normal good.
C) A is an inferior good.
D) B is an inferior good.
E) both A and B are normal goods.
- 19) At a garage sale, a consumer purchases a sewing machine for \$30 and was willing to pay \$55. If the sewing machine costs \$200 new, consumer surplus would be _____.
A) \$0 B) \$25 C) \$120 D) \$145 E) \$170

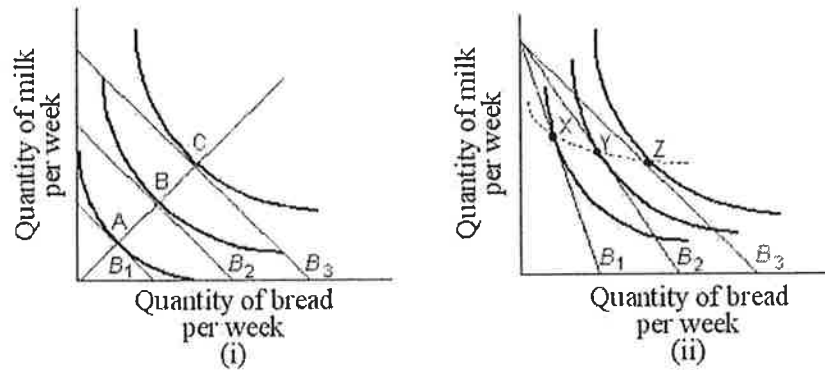


FIGURE 6-8

- 20) Refer to Figure 6-8. In part (ii), the consumer's move from point Z to point Y is caused by
- a change in the consumer's preferences towards milk.
 - an increase in the price of milk.
 - an increase in the price of bread.
 - an decrease in the price of bread.
 - a decrease in money income.
- 21) If leisure is a normal good then an increase in the wage rate has an income effect, which results in _____ consumption of leisure, and a substitution effect, which results in _____ consumption of leisure.
- reduced; reduced
 - reduced; increased
 - reduced; unchanged
 - increased; reduced
 - increased; increased
- 22) The choices listed below involve costs to the firm. For which is the implicit cost potentially different than its explicit cost?
- The use of firm-owned assets.
 - The services of hired workers.
 - The use of rented land.
 - The interest paid on borrowed money.
 - The purchase of raw materials used in production.
- 23) Suppose that when one additional unit of labour is hired, total product increases from 100 to 110 units of output per month. Marginal product must therefore be
- increasing.
 - positive.
 - decreasing.
 - constant.
 - zero.
- 24) Suppose an NHL hockey player is averaging three points per game going into the last game of the season in which he collects four points, thereby changing his average for the season. To use an analogy in economics, it could be said that average product increases
- when total product increases.
 - when marginal product exceeds average product.
 - when average product exceeds marginal product.
 - when marginal product increases.
 - whenever marginal product is positive.

- 25) Short-run cost curves are eventually upward-sloping because of the effects of
- A) the increasing price of variable inputs.
 - B) diminishing marginal product.
 - C) increasing fixed costs.
 - D) increasing marginal productivity of the variable inputs.
 - E) decreasing total product.
- 26) Suppose that capital costs \$10 per unit and labour costs \$5 per unit. For a profit-maximizing firm operating at its optimal factor mix, if the marginal product of capital is 50, the marginal product of labour must be _____.
- A) 10 B) 20 C) 25 D) 50 E) 100
- 27) Any point representing a cost and output combination that is below the long-run average cost curve
- A) may represent actual cost and production levels in the short run.
 - B) represents less efficient cost levels than points on the long-run average cost curve.
 - C) is attainable only when all factors are variable.
 - D) represents unattainable cost levels.
 - E) is attainable if the firm minimizes its costs according to the "principle of substitution".
- 28) A *LRAC* curve will shift downward because of
- A) specialization.
 - B) a decrease in factor prices.
 - C) the use of large, specialized machinery as the volume of output increases.
 - D) factor substitution.
 - E) economies of scale.
- 29) Suppose a perfectly competitive firm is producing a level of output for which price equals average total cost, and average total cost is less than marginal cost. In order to maximize its profits, the firm should
- A) reduce its output.
 - B) expand its output.
 - C) shut down.
 - D) increase the market price.
 - E) not change its output.
- 30) If firms in a competitive industry are earning positive economic profits, in the long run we expect
- A) the demand curve for the product will shift to the left, so that the price of the product will fall.
 - B) the supply curve for the product will shift to the right as new firms enter the industry, causing industry output to increase and price to fall.
 - C) there would be no change in the industry as long as $P = MC$ for the individual firms.
 - D) the individual firms will lower their price to discourage new firms from entering the industry.
 - E) the government would intervene and force the firms to lower prices.
- 31) Marginal revenue is less than price for a single-price monopolist because the
- A) firm's output decisions do not affect the selling price.
 - B) firm must lower its price for all units if it wants to sell more of the product.
 - C) monopolist charges a price higher than the unit production cost.
 - D) monopolist must worry about how its price setting will lead to entry by other firms.
 - E) monopolist has achieved economies of scale.

- 32) The two characteristic problems for cartels are
- A) agreeing on the price to be set and preventing new entrants.
 - B) policing members' output restrictions and preventing new entrants.
 - C) coordinating marketing policies and policing members' quotas.
 - D) agreeing on the price to be set and coordinating marketing policies.
 - E) policing members' prices and restricting output.
- 33) "Brand proliferation" in an oligopolistic industry
- A) allows easier entry to a new entrant with small sales.
 - B) can shift the average total cost curve down and raise the overall minimum efficient scale of operation.
 - C) allows new entrants to the industry to gain significant market share.
 - D) will generally reduce the expected market share of new entrants to the industry.
 - E) allows firms to cooperate to maximize their joint profits.

The payoff matrix below shows the payoffs to Firms A and B from producing different levels of output. The numbers in parentheses are (payoff to A, payoff to B).

		Firm B	
		Produce 1 000 Units	Produce 2 000 Units
Firm A	Produce 1 000 Units	(100, 100)	(10, 150)
	Produce 2 000 Units	(150, 10)	(30, 30)

TABLE 11-3

- 34) Refer to Table 11-3. The Nash equilibrium in this game is
- A) (Firm A: produce 1000 units, Firm B: produce 1000 units).
 - B) (Firm A: produce 2000 units, Firm B: produce 1000 units).
 - C) (Firm A: produce 2000 units, Firm B: produce 2000 units).
 - D) (Firm A: produce 1000 units, Firm B: produce 2000 units).
 - E) non-existent.

The diagram below shows supply, demand, and quantity exchanged of Monday matinee movie tickets. Assume it is a perfectly competitive market.

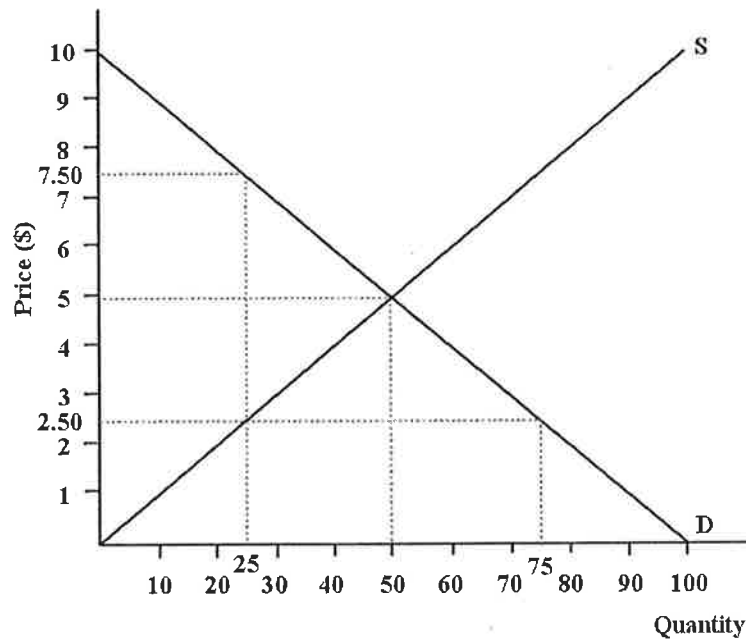


FIGURE 12-4

35) Refer to Figure 12-4. What is the value of the producer surplus generated in this market at the free-market equilibrium?

- A) \$0 B) \$5 C) \$10 D) \$125 E) \$250

36) Consider a natural monopoly that has declining ATC over the entire range of the market demand curve. If it is regulated and required to charge a price that is equal to MC , the resulting level of output is

- A) allocatively efficient, and profit is earned.
 B) allocatively efficient, but the firm must be paid a subsidy or it will eventually go out of business.
 C) less than the allocatively efficient level, and profit is zero.
 D) less than the allocatively efficient level, but losses occur.
 E) greater than the allocatively efficient level, but losses occur.

The diagram below shows the domestic demand and supply curves in the market for newsprint in Paperland.

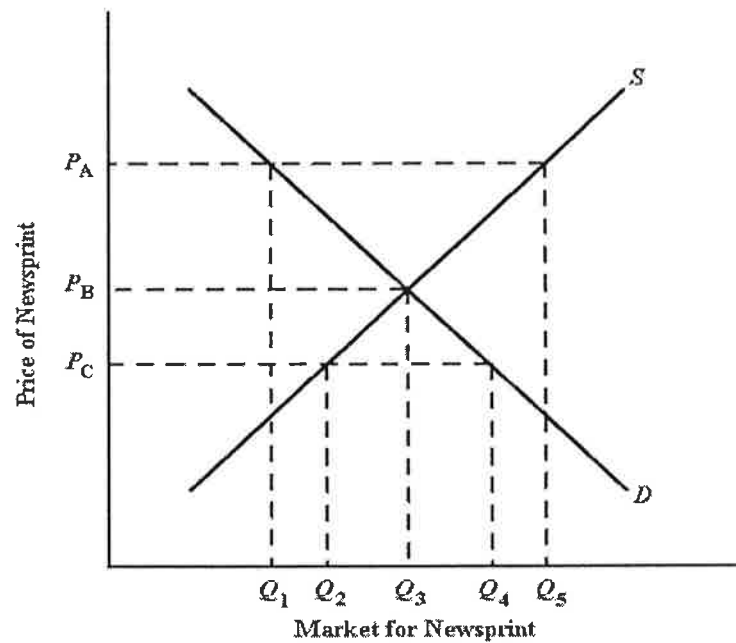


FIGURE 33-5

- 37) Refer to Figure 33-5. If Paperland engages in international trade and the world price is P_A , the amount of newsprint _____ will be _____.
- A) imported; $Q_5 - Q_1$
 - B) exported; Q_5
 - C) imported; Q_1
 - D) exported; $Q_5 - Q_1$
 - E) imported; $Q_5 - Q_3$

The diagram below shows the domestic demand and supply curves for cotton towels in Canada. The prevailing world price of cotton towels is P_W . Assume that all cotton towels are identical.

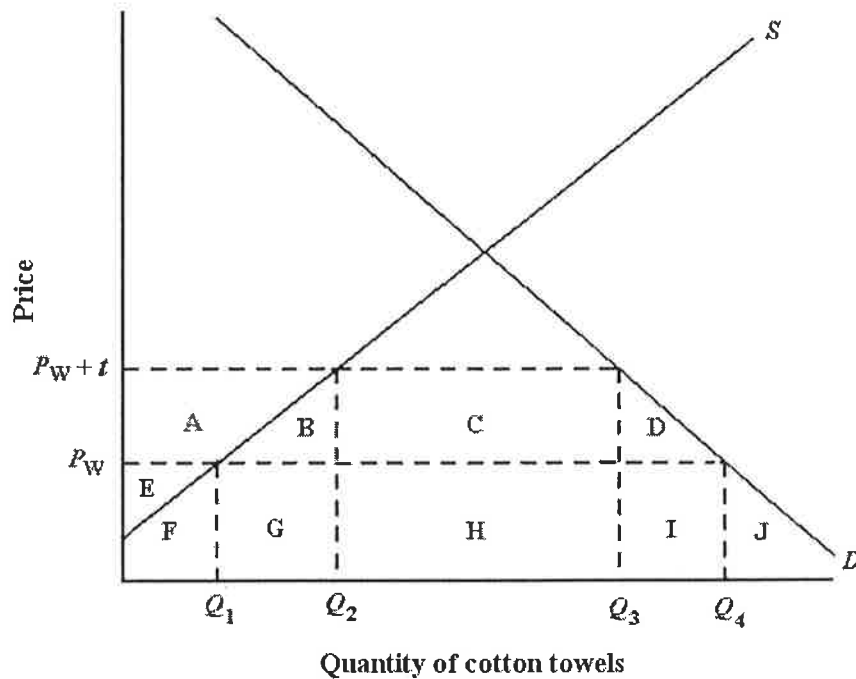


FIGURE 34-3

- 38) Refer to Figure 34-3. If Canada imposes a tariff of $\$t$ per cotton towel, the deadweight loss to the Canadian economy is shown by area
- A + B + C.
 - A + B + C + D.
 - B + D.
 - C .
 - C + H.
- 39) Consider labour that is hired for \$18 per hour. If the last hour of labour hired produces 8 units of output which sells for \$10 per unit, that labour-hour adds _____ to the firm's profit and so _____ labour should be hired.
- \$64; more
 - \$64; less
 - \$62; less
 - \$62; more
 - \$0; no
- 40) Suppose Harrison Ford makes 2 movies per year and earns \$10 million per movie. Suppose that if he weren't making movies his next best alternative would be to earn \$500,000 per year endorsing shampoo. By making movies, Harrison Ford
- is earning economic rent of \$20,500,000 per year.
 - is earning economic rent of \$20,000,000 per year.
 - is earning economic rent of \$19,500,000 per year.
 - is earning economic rent of \$500,000 per year.
 - is not earning economic rent.

Part B [8 marks]

Answer all 8 questions; each question is worth 1 mark.

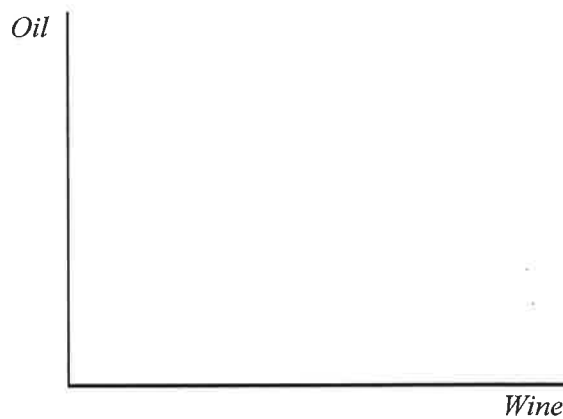
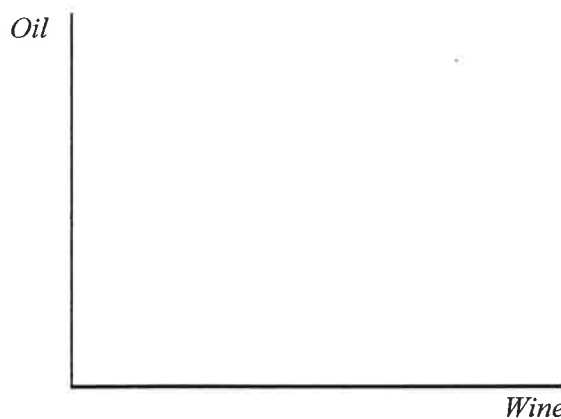
The following 8 questions (41-48) relate to the information given below. Try to do the questions in order since the answers for some questions depend on the answers to previous questions in the series.

B. The production possibility boundaries for Alberta and Ontario, both producing wine (W) (measured in bottles) and oil (O) (measured in barrels) are given by:

$$\text{Alberta: } O = 40 - 4W$$

$$\text{Ontario: } O = 30 - W$$

You may wish to use the diagrams and space below to sketch production possibilities boundaries for Alberta and Ontario, and keep track of your answers as you work through the series.



- 41) If the provinces do not trade with anyone and each consumes at the midpoint of its production possibilities boundary, consumption of Wine and Oil in Alberta and Ontario will be given by $(W_A, O_A), (W_O, O_O) =$
- A) (15,15), (5, 20)
 - B) (15,15), (20, 5)
 - C) (5, 20), (15, 15)
 - D) (20, 5), (15,15)
 - E) none of the above
- 42) The opportunity costs of Wine in terms of Oil in Alberta and in Ontario respectively are:
- A) (4, 1)
 - B) (1, 4)
 - C) (1, 1)
 - C) (0.25, 1)
 - D) (1, 0.25)

- 43) Alberta has a comparative advantage in ____ and Ontario has a comparative advantage in ____.
- A) (Oil, Oil)
 - B) (Wine, Wine)
 - C) (Oil, Wine)
 - D) (Wine, Oil)
 - E) none of the above.
- 44) If the two provinces trade with each other only, Alberta and Ontario should specialize, respectively, in ____ and ____:
- A) (Wine, Wine)
 - B) (Oil, Wine)
 - C) (Wine, Oil)
 - D) (Oil, Oil)
 - E) none of the above
- 45) Now suppose the two provinces can independently trade with the outside world, but do not trade with each other. The world price is 1 bottle of wine for 5 barrels of oil. Then Alberta and Ontario will specialize, respectively, in
- A) (Wine, Wine)
 - B) (Oil, Wine)
 - C) (Wine, Oil)
 - D) (Oil, Oil)
 - E) none of the above
- 46) Suppose now that the worldwide producers of Oil form a cartel and manage to change the relative price of Oil so that one bottle of Wine is worth one barrel of Oil. Relative to the situation in question 45), and assuming that each province always consumes at the midpoint of its consumption possibilities frontier, this change will make Alberta ____ and Ontario ____.
- A) worse off, worse off
 - B) better off, better off
 - C) better off, worse off
 - D) worse off, better off
 - E) better off, no better or worse off
- 47) Given the situation in question 46), Alberta will
- A) export 15 barrels of Oil
 - B) import 15 barrels of Oil
 - C) export 20 bottles of wine
 - D) import 20 bottles of wine
 - E) export 15 bottles of wine
- 48) The federal government imposes a Protect Ontario Wine program (POW) that bans all external trade in Wine and Oil. The relative prices of oil and wine in Canada change so that one bottle of wine is worth two barrels of oil. Relative to the situation in 46) this makes Alberta ____ and Ontario ____.
- A) better off, better off
 - B) worse off, worse off
 - C) no better or worse off, no better or worse off
 - D) better off, worse off
 - E) worse off, better off

Part C [8 marks]

Answer all 8 questions; each question is worth 1 mark.

The following 8 questions (49-56) relate to the information given below. Try to do the questions in order since the answers for some questions depend on the answers to previous questions in the series.

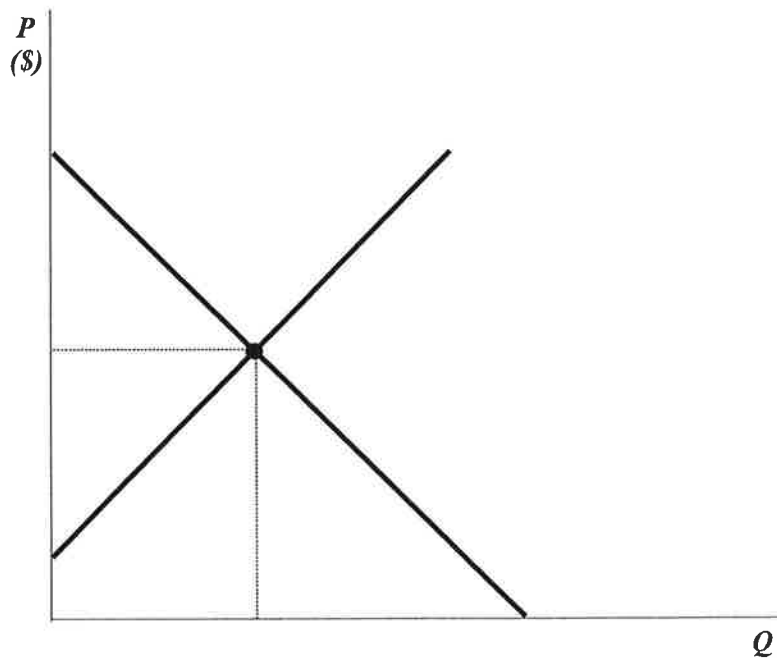
C. Suppose the Demand and Supply curves for a competitive market are as given below:

$$Q_d = 90 - 3P$$

$$Q_s = -10 + 2P$$

In the equations above, Q_d and Q_s are the quantities demanded and supplied and P is the price in dollars.

The diagram and space below is provided so you can keep track of your answers as you work through the series of questions.



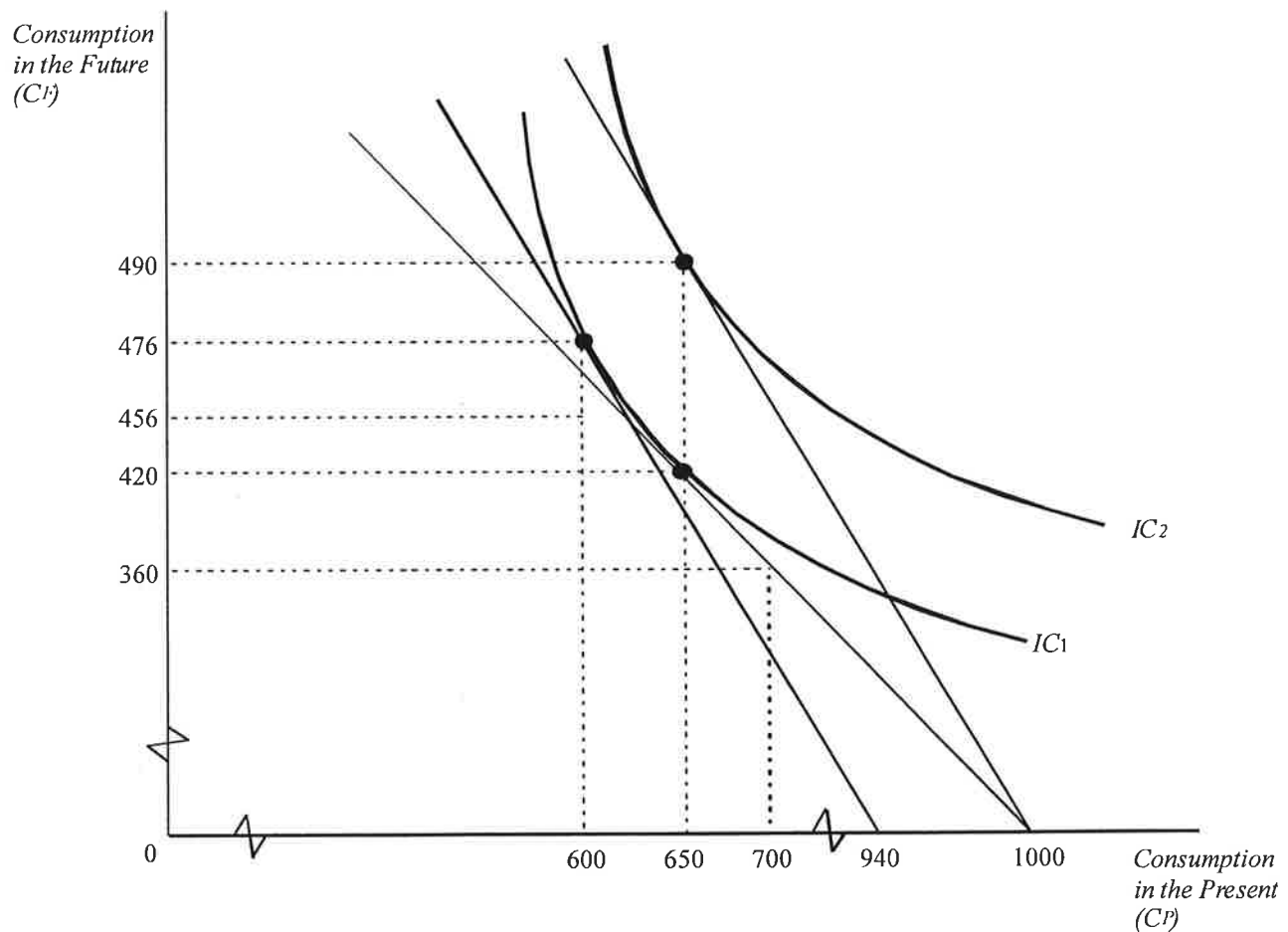
- 49) For the Demand curve the " P -intercept" is ____, and for the Supply curve the " P -intercept" is ____.
A) 90; -10 B) 90; 5 C) 30; -10 D) 30; 5 E) 30; 20
- 50) The equilibrium price is equal to ____ and the equilibrium quantity is equal to ____.
A) \$100; 190 units B) \$30; 50 units C) \$20; 30 units D) \$5; 75 units E) \$3; 81 units
- 51) In equilibrium, consumer surplus is equal to:
A) \$600 B) \$375 C) \$225 D) \$150 E) \$0
- 52) At the equilibrium point the elasticity of demand is equal to:
A) 9/2 B) 2 C) 3/2 D) 2/3 E) 1/2
- 53) A decrease in the number of firms in the industry would lead to
A) an increase in total spending on the good.
B) an increase in the equilibrium quantity sold.
C) an uncertain effect on total spending on the good.
D) an uncertain effect on the equilibrium quantity sold.
E) a decrease in total spending on the good.
- 54) Suppose the government imposes a maximum price (price ceiling) equal to \$15.
A) This will lead to excess supply in the market equal to 25 units.
B) This will lead to excess supply in the market equal to 10 units.
C) This will have no affect on the market.
D) This will lead to excess demand in the market equal to 10 units.
E) This will lead to excess demand in the market equal to 25 units.
- 55) As a result of the government's action:
A) there is inefficiently low output and deadweight loss in the market
B) there is inefficiently low output but no deadweight loss in the market
C) there is inefficiently high output and deadweight loss in the market
D) there is inefficiently high output but no deadweight loss in the market
E) there is an efficient outcome in the market
- 56) Given this regulated price, if illegal trade takes place, the highest price at which it will take place is:
A) \$30 B) \$27.50 C) \$23.33 D) \$15 E) \$5

Part D [8 marks]

Answer all 8 questions; each question is worth 1 mark.

The following 8 questions (57-64) relate to the information given below. Try to do the questions in order since the answers for some questions depend on the answers to previous questions in the series.

D. The diagram below represents the situation of a household with working life (the present) income of 1,000 thousand dollars (1,000K) of which this household saves 350K when the interest rate is equal to $r^0 = 20\%$. Note that this saving behaviour yields the household's optimal bundle $(C_P, C_F) = (650, 420)$.



- 57) At the interest rate of $r^0 = 20\%$, the opportunity cost of \$1 of C_P is ____ dollars of lost C_F .
 A) 0.20 B) 0.83 C) 1.00 D) 1.20 E) 2.40
- 58) If, as shown in the diagram, the household still saves 350K when the interest rate increases to $r^1 = 40\%$, then present consumption C_P is a(n) ____ good and future consumption C_F is a(n) ____ good.
 A) normal; normal
 B) inferior; normal
 C) normal; inferior
 D) inferior; inferior
 E) inferior Giffen; inferior Giffen

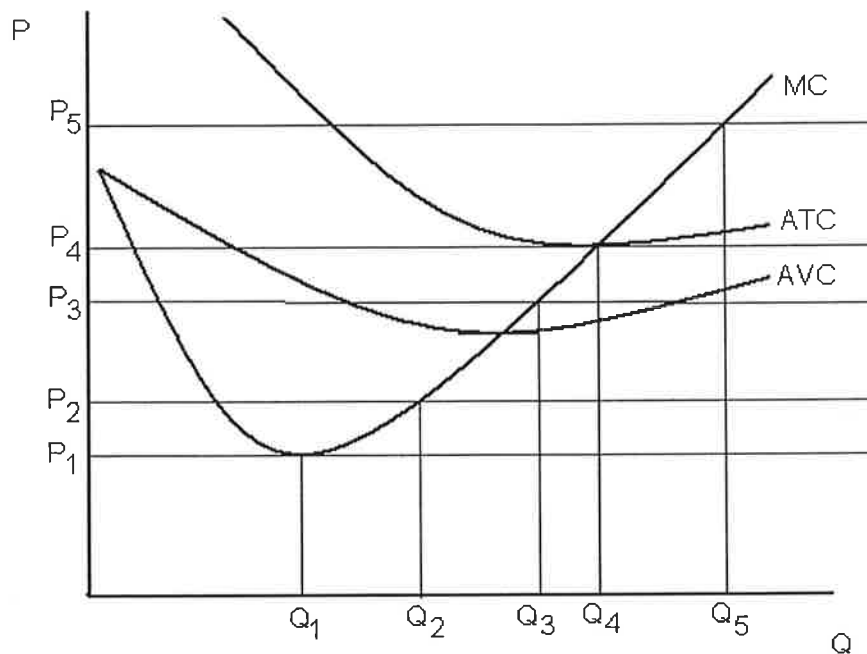
- 59) If, as shown in the diagram, the household still saves 350K when the interest rate increases to $r^1 = 40\%$, the substitution and income effects on C_P are _____ and _____:
 A) 50; -50 B) 50; 50 C) -50; 50 D) -50; -50 E) 0; 0
- 60) When C_P is a normal good, then in general (not for this household), in response to an increase in the interest rate, C_P _____ because the substitution and income effects work in _____:
 A) will rise; the same direction
 B) will fall; opposite directions
 C) will rise; opposite directions
 D) will fall; the same direction
 E) may rise or fall; opposite directions
- 61) Suppose the interest rate is $r^1 = 40\%$ and the government imposes an income tax of $T = 60$ on the household's current income. If the household chooses $C_P = 600$, the savings of the household would thus amount to _____ and its future consumption (C_F) to _____:
 A) 350; 420 B) 350; 490 C) 400; 476 D) 340; 476 E) 340; 456
- 62) Suppose the interest rate is $r^0 = 20\%$ and the government institutes a mandatory public pension plan where the household must pay a premium of 300 in the present, but will receive a benefit of 360 to consume in the future. Relative to the (C_P, C_F) bundle (700, 360), the household will:
 A) do nothing, it will consume the bundle
 B) engage in private saving to increase both C_P and C_F
 C) engage in private saving to decrease C_P and increase C_F
 D) engage in private borrowing to increase C_P and decrease C_F
 E) engage in private borrowing to increase both C_P and C_F
- 63) Suppose the interest rate is $r^1 = 40\%$ and the government institutes a mandatory public pension plan where the household must pay a premium of 350 in the present, but will receive a benefit of 490 to consume in the future. Relative to the (C_P, C_F) bundle (650, 490), the household will:
 A) do nothing, it will consume the bundle
 B) engage in private saving to increase both C_P and C_F
 C) engage in private saving to decrease C_P and increase C_F
 D) engage in private borrowing to increase C_P and decrease C_F
 E) engage in private borrowing to increase both C_P and C_F
- 64) Now suppose that the government institutes the mandatory public pension plan where the household must pay a premium of 350 in the present, but will receive a benefit of 490 to consume in the future (as in 63) above. But suppose the interest rate is $r^0 = 20\%$. Relative to the (C_P, C_F) bundle (650, 490), the household will:
 A) do nothing, it will consume the bundle
 B) engage in private saving to increase both C_P and C_F
 C) engage in private saving to decrease C_P and increase C_F
 D) engage in private borrowing to increase C_P and decrease C_F
 E) engage in private borrowing to increase both C_P and C_F

Part E [8 marks]

Answer all 8 questions; each question is worth 1 mark.

The following 8 questions (65-72) relate to the information given below. Try to do the questions in order since the answers for some questions depend on the answers to previous questions in the series.

E. Below is a diagram of a set of short run cost curves for a firm in a perfectly competitive industry. All the firms in the industry have the same cost curves. There is a long run total cost curve (not shown) that is tangent to the ATC curve where ATC reaches a minimum.



- 65) Suppose the market price in this industry is P_5 . In the short run the firm will
- A) produce at Q_5 and make positive profits.
 - B) produce at Q_5 and make negative profits.
 - C) produce at Q_5 and make zero profits.
 - D) leave the industry
 - E) shut down.
- 66) Suppose the market price in this industry is P_2 . In the short run the firm will:
- A) produce at Q_2 and make positive profits.
 - B) produce at Q_2 and make negative profits.
 - C) produce at Q_2 and make zero profits.
 - D) leave the industry.
 - E) shut down.

- 67) Suppose the market price in this industry is P_3 . In the short run the firm will:
- A) produce at Q_3 and make positive profits.
 - B) produce at Q_3 and make negative profits.
 - C) produce at Q_3 and make zero profits.
 - D) leave the industry.
 - E) shut down.
- 68) Suppose the market price in this industry is P_3 . In the long run the firm may
- A) produce at Q_3 and make positive profits.
 - B) produce at Q_3 and make negative profits.
 - C) produce at Q_3 and make zero profits.
 - D) leave the industry.
 - E) shut down.
- 69) Suppose the market price in this industry is P_3 . Eventually, if entry and exit are free, then in long run equilibrium:
- A) the number of firms will rise and each will produce Q_3 .
 - B) the number of firms will fall and each will produce Q_3 .
 - C) the number of firms will fall and each will produce Q_4 .
 - D) the number of firms will rise and each will produce Q_4 .
 - E) the number of firms will fall and each will produce Q_5 .
- 70) Suppose the market price in this industry is P_5 . Eventually, if entry and exit are free, then in long run equilibrium:
- A) the number of firms will rise and each will produce Q_3 .
 - B) the number of firms will fall and each will produce Q_3 .
 - C) the number of firms will fall and each will produce Q_4 .
 - D) the number of firms will rise and each will produce Q_4 .
 - E) the number of firms will fall and each will produce Q_5 .
- 71) Suppose now that the firms' products can be differentiated from each other, so that the industry is monopolistically competitive. In long run equilibrium with free entry, relative to the long run competitive equilibrium, each firm will:
- A) set price higher and quantity higher.
 - B) set price lower and quantity higher.
 - C) set price higher and quantity lower.
 - D) set price lower and quantity lower.
 - E) set price and quantity exactly the same.
- 72) In the long run monopolistically competitive equilibrium with free entry, each firm will set:
- A) price above marginal cost and make positive economic profits.
 - B) price above marginal cost and make zero economic profits.
 - C) price above marginal cost and make negative economic profits.
 - D) price equal to marginal cost and make positive economic profits.
 - E) price equal to marginal cost and make zero economic profits.

Part F [8 marks]

Answer all 8 questions; each question is worth 1 mark.

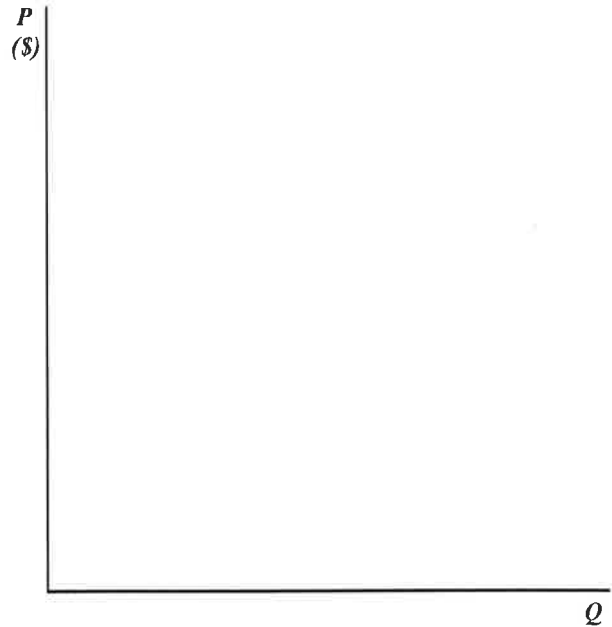
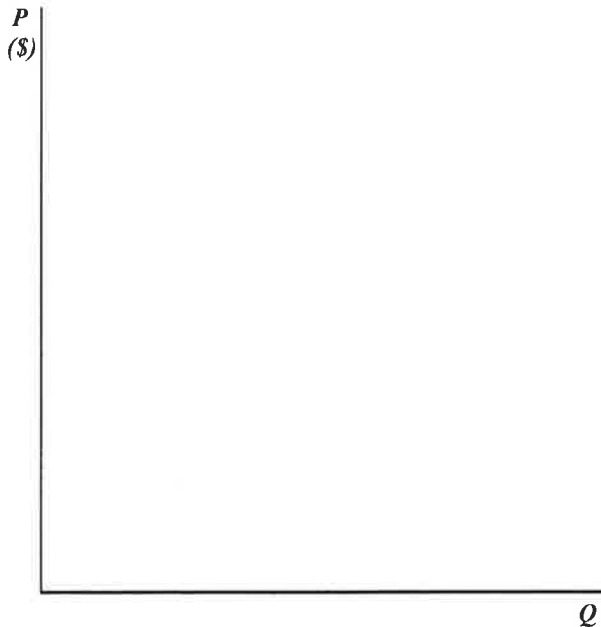
The following 8 questions (73-80) relate to the information given below. Try to do the questions in order since the answers for some questions depend on the answers to previous questions in the series.

- F. Suppose that the (inverse) demand curve and the corresponding marginal revenue curve for a market are given by:

$$P = 60 - \frac{1}{2} Q$$

$$MR = 60 - Q$$

You may wish to use the diagrams below to sketch the demand and marginal revenue curves (and other question elements) and keep track of your answers as you work through the series.



- 73) A monopolist serving this market would never charge a price lower than _____ because _____:
- A) 40; at 40 any monopolist would maximize profits
 - B) 10; at 10 it already sells a sufficiently large quantity
 - C) 20; at 20 any monopolist would maximize profits
 - D) 30; at 30 total revenue starts falling;
 - E) 30; at 30 total revenue is still rising

- 74) If the monopolist's total cost function is given by $TC = 400 + 20Q$, and therefore marginal cost: $MC = 20$, then as a single-price monopolist it will produce _____ units and charge a price equal to _____:
A) 60; 30 B) 40; 20 C) 40; 40 D) 20; 40 E) 20; 50
- 75) This single-price monopolist would therefore make profits equal to _____ and the consumer surplus in this market would be equal to _____:
A) 800; 200
B) 400; 400
C) 800; 800
D) 200; 600
E) 600; 600
- 76) The deadweight loss due to the monopoly in this market would be equal to _____:
A) 800 B) 600 C) 400 D) 200 E) zero
- 77) Now suppose that the monopolist can practice perfect price discrimination and charge every consumer the maximum that the consumer is willing to pay. The monopolist will now sell quantity equal to _____ earn profits equal to _____:
A) 80; 1,200
B) 40; 1,000
C) 60; 800
D) 20; 1,600
E) 120; 1,600
- 78) The deadweight loss due to the perfectly price discriminating monopoly would be equal to _____:
A) 800 B) 600 C) 400 D) 200 E) zero
- 79) Now suppose that the monopolist is no longer able to perfectly price discriminate. But it determines that an additional new market has emerged, one with the (inverse) demand curve and the corresponding marginal revenue curve given by:
- $$P = 60 - Q \qquad MR = 60 - 2Q$$
- If the monopolist succeeds in segmenting the two markets (i.e. it prevents arbitrage completely), then it will charge a price equal to _____ in the old market and a price equal to _____ in the new market:
A) 60; 30 B) 40; 20 C) 20; 50 D) 20; 40 E) 40; 40
- 80) Imagine that the monopolist's marginal cost were increasing rather than being constant. Compared to the initial monopoly in the first market, the emergence of the new market would induce:
A) a lower price and a higher quantity in the initial market
B) a higher price and a lower quantity in the initial market
C) a lower price and a lower quantity in the initial market
D) a higher price and a higher quantity in the initial market
E) no change in the initial market price and quantity

CORRECTION NOTICE

ECON 110/111 – December 7, 19:00

On page 4, question 5:

Replace Table 33-4

	Cotton (bales)	Cocoa Beans (bushels)
Peru	2	4
Brazil	1	6

TABLE 33-4 (new)