

Name: \_\_\_\_\_

Student #: \_\_\_\_\_

**HAND IN**  
answers recorded  
on question paper

**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 12, 2019**

**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.

**The following aids are allowed:**

Casio FX-991 calculator

**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.

**Part A** [40 marks]

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

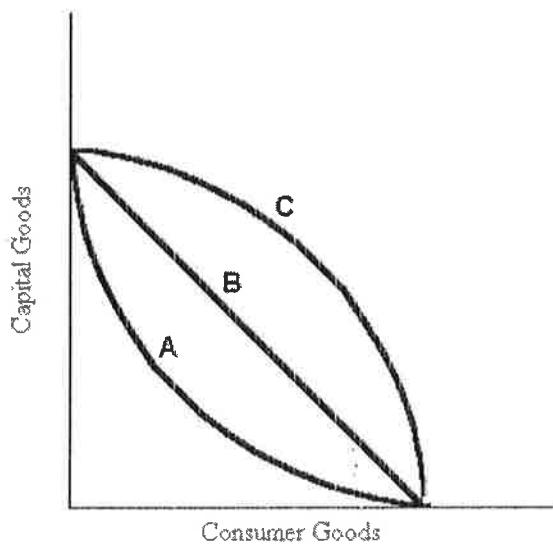
Answer all 40 questions; each question is worth 1 mark.

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.

2) A point lying inside the production possibilities boundary is one at which

- A) there is no scarcity.
- B) the opportunity cost of producing more output is negative.
- C) it is not possible to produce more output with existing resources.
- D) the economy has run out of resources.
- E) more output could be produced with existing resources.



**FIGURE 1-4**

3) Refer to Figure 1-4. Which production possibilities boundaries are consistent with increasing opportunity costs?

- A) boundary A only
- B) boundaries A and B
- C) boundary C only
- D) boundaries B and C
- E) boundaries A, B, and C

- 4) 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.
- 5) Suppose there is a theory that several things influence the price of fish in Halifax, one of which is the weather during the fishing season. When examining the determinants of the price of fish, weather is
- A) an endogenous variable, as it influences the price of fish.
  - B) an exogenous variable, as it is determined outside the theory.
  - C) a stock, as it influences the quantity of fish caught.
  - D) an act of God and, therefore, has no legitimate connection with the theory.
  - E) an endogenous variable, as it is determined within the theory.
- 6) There will be no gains from specialization and trade between two countries if
- 1) neither country has an absolute advantage in the production of any good;
  - 2) neither country has a comparative advantage in the production of any good;
  - 3) opportunity costs differ too much between the two countries.
- A) 1 only                    B) 2 only                    C) 3 only                    D) 1 and 2                    E) 2 and 3
- 7) Consider a country that is initially autarkic and then engages freely in international trade. If a country has a comparative advantage in the production of soybeans, it will most probably
- A) derive no advantage from any trade in soybeans.
  - B) decrease the production of soybeans for domestic consumption.
  - C) increase the production of soybeans for domestic consumption.
  - D) increase the production of soybeans to allow for the export of soybeans.
  - E) import soybeans
- 8) Consider butter and margarine, which are substitutes. When the price of butter falls, the demand curve for margarine is likely to
- A) shift to the right.
  - B) shift to the left.
  - C) remain stationary.
  - D) remain stationary, although its price will fall.
  - E) remain stationary, although its price will rise.
- 9) Suppose the demand curves for goods A, B, and C have the following functional forms, where Q denotes quantity demanded, P denotes price, and M denotes income:
- $$Q_A = 120 - 3.5P_A - 6P_B + 14M$$
- $$Q_B = 100 - 2P_B + 3P_C + 1.1M$$
- $$Q_C = 1500 - 0.5P_C - 300M.$$

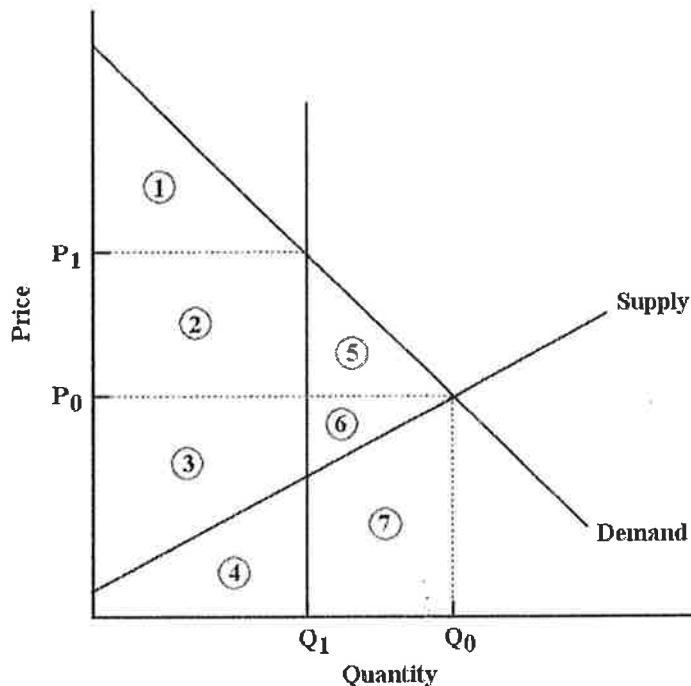
Based on these demand curves, which of the following goods are known to be normal goods?

- A) A only                    B) B only                    C) C only                    D) A and B only                    E) A, B and C

- 10) A decrease in the price of raw milk (which is used in the production of ice cream) will
- A) decrease the supply of ice cream, causing the supply curve of ice cream to shift to the left.
  - B) increase the supply of ice cream, causing the supply curve of ice cream to shift to the right.
  - C) decrease the supply of ice cream, causing the supply curve to shift to the right.
  - D) have no effect on the supply curve of ice cream but cause a downward movement along the supply curve of ice cream.
  - E) increase the supply of ice cream, causing the supply curve to shift to the left.
- 11) Suppose that supply for some good increases and that simultaneously the demand for the same good decreases. The result would be
- A) a decrease in P and an indeterminate change in Q.
  - B) a decrease in Q and an indeterminate change in P.
  - C) an increase in Q and a decrease in P.
  - D) an increase in Q and an increase in P.
  - E) no change in either P or Q.
- 12) 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.
- 13) Suppose egg producers succeed in permanently raising the price of their product by 15 percent, and as a result the quantity demanded falls by 15 percent in the short run. In the long run we can expect the quantity demanded to fall by
- A) 0 percent.
  - B) 15 percent.
  - C) between 0 and 15 percent.
  - D) more than 15 percent.
  - E) 100 percent.
- 14) When a product's price has an inverse relationship with total expenditure, then demand has a price elasticity of
- A) zero.
  - B) less than one.
  - C) greater than one.
  - D) one.
  - E) inverse proportions.
- 15) The imposition of an excise tax usually causes the price paid by consumers to \_\_\_\_\_, while the price received by sellers \_\_\_\_\_.
- A) rise; remains unchanged
  - B) rise; falls
  - C) rise; rises
  - D) fall; remains unchanged
  - E) fall; falls

- 16) At any disequilibrium price, whether controlled or not, the quantity *actually* exchanged is determined by
- the elasticity of supply.
  - the elasticity of demand.
  - government decree.
  - the lesser of quantity demanded and quantity supplied.
  - the greater of quantity demanded and quantity supplied.

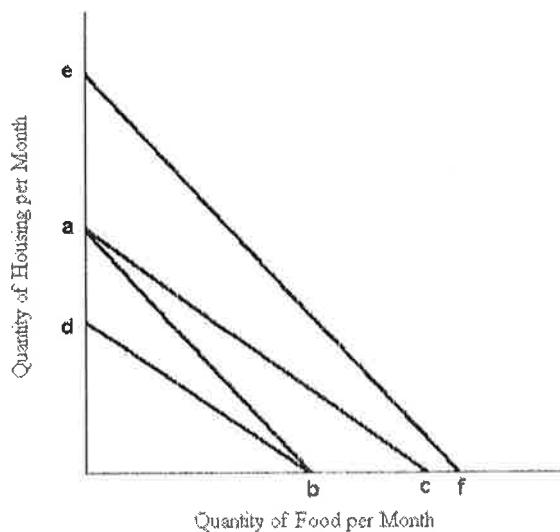
**The diagram below shows the market for litres of milk.**



**FIGURE 5-8**

- 17) Refer to Figure 5-8. Suppose that a binding output quota is imposed on this market at quantity  $Q_1$ . The loss in economic surplus due to the quota is equal to
- areas 5 and 6.
  - areas 5, 6 and 7.
  - areas 2 and 5.
  - area 1.
  - areas 1, 2 and 3.
- 18) The substitution effect of a price change
- will result in the consumer buying less of a good at a lower price.
  - will result in the consumer buying less of a good at a higher price.
  - outweighs the income effect for Giffen goods.
  - is equal to the income effect for normal goods.
  - is equal to the income effect for inferior goods.

The diagram below shows a set of budget lines facing a household.

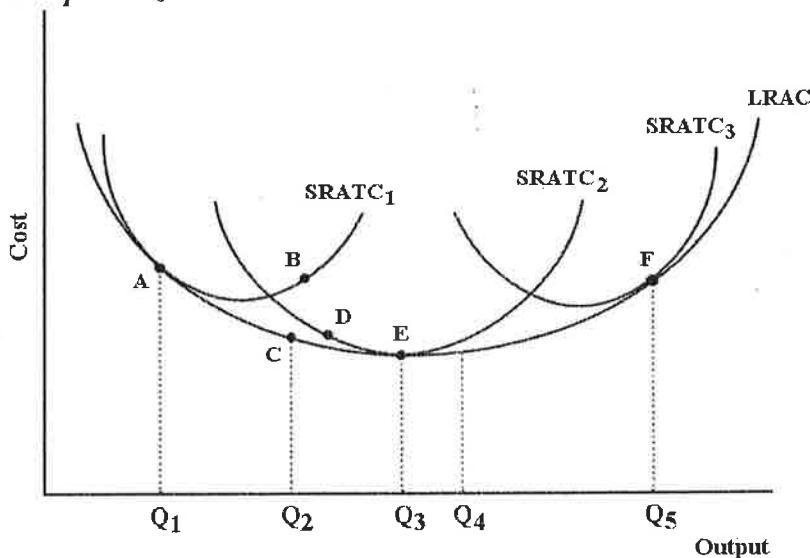


**FIGURE 6-7**

- 19) Refer to Figure 6-7. The movement of the budget line from **ab** to **db** could be caused by
- a decrease in money income.
  - an increase in the price of housing.
  - a decrease in the price of housing.
  - an increase in the price of food.
  - a decrease in the price of food.
- 20) An increase in current income will
- increase saving for retirement if consumption in the present is a normal good.
  - decrease saving for retirement if the substitution effect is stronger than the income effect.
  - increase saving for retirement if consumption in retirement is a normal good.
  - have no effect on saving for retirement.
  - have an uncertain effect on saving for retirement, no matter what the individual's preferences.
- 21) 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.
- 22) Jodi recently went into business producing widgets. Which of the following would be a fixed cost for her?
1. labour costs are \$1000 per month
  2. raw material costs are \$5000 per month
  3. a one-year lease on a building is \$12 000
- A) 1 only      B) 2 only      C) 3 only      D) 1 and 2 only      E) 2 and 3 only

- 23) In the short run, if average total cost is increasing as output rises, then
- A) total fixed costs must be increasing.
  - B) average fixed costs must be increasing.
  - C) average variable cost must be increasing.
  - D) marginal cost must be below average total cost.
  - E) average total cost is no longer equal to the sum of average variable cost and average fixed cost.
- 24) Suppose a firm producing digital cameras is operating such that marginal costs are higher than average costs. If the firm produces one more camera, average costs will
- A) rise.
  - B) fall.
  - C) reach a point of diminishing returns.
  - D) remain constant.
  - E) reach their maximum.
- 25) The long-run average cost (LRAC) curve shows
- A) the lowest unit cost at which the firm can produce a given output.
  - B) the highest unit costs of producing a given output.
  - C) the operation of the law of diminishing returns.
  - D) what happens to the fixed costs in the long run.
  - E) none of the above.
- 26) Assume a firm is using 6 units of capital and 6 units of labour to produce 6 baskets. Now it doubles both inputs resulting in a new total of 16 baskets being produced. This firm is experiencing
- A) decreasing returns to scale.
  - B) increasing returns to scale.
  - C) constant returns to scale.
  - D) diseconomies of scale.
  - E) increasing costs.
- 27) If there is a fall in all factor prices faced by a firm,
- A) the firm will move to a lower point on both its long-run and short-run average cost curves.
  - B) the firm will move to a lower point on its long-run average cost curve only.
  - C) both the long-run and short-run average cost curves will shift downward.
  - D) there will be a downward shift in the long-run average cost curve but not in the short-run average cost curve.
  - E) there will be no change in the cost curves in the long run.

The figure below shows a family of cost curves for a firm. The subscripts 1, 2, and 3 for the SRATC curves refer to different plant sizes.



**FIGURE 8-3**

- 28) Refer to Figure 8-3. If this firm is producing at point B, then
- this firm is producing a level of output that is technically inefficient in the long run.
  - this firm is experiencing decreasing returns to scale.
  - this firm could produce the same level of output at a lower cost with plant size 2.
  - it should employ more of its variable factors of production.
  - plant size 1 is optimal.
- 29) In the short run, when a perfectly competitive firm is at its profit-maximizing level of output, it
- is doing as well as it can and is making a profit.
  - may be making a profit or incurring a loss.
  - is producing where  $P = AVC$ .
  - is producing where  $MC = AC$ .
  - is producing where price exceeds marginal cost.
- 30) If a perfectly competitive firm is faced with average revenue below average variable cost it will shut down so as to reduce its
- costs to below its revenue.
  - costs to zero.
  - losses to the amount of its fixed costs.
  - losses to the amount of its variable costs.
  - losses to the amount of its marginal costs.
- 31) Marginal revenue is less than price for a single-price monopolist because the
- firm's output decisions do not affect the selling price.
  - firm must lower its price for all units if it wants to sell more of the product.
  - monopolist charges a price higher than the unit production cost.
  - monopolist must worry about how its price setting will lead to entry by other firms.
  - monopolist has achieved economies of scale.

32) A monopolistically competitive firm and a monopoly are similar because

- A) both firms will earn zero profits in the long run.
- B) both firms always operate at their point of minimum average total cost.
- C) each firm can raise its price without losing all of its sales.
- D) both firms must behave strategically toward other firms in the industry.
- E) each firm has a large number of small competitors.

33) One prediction about monopolistic competition is that it has higher unit costs than perfect competition.

But it is unreasonable to conclude that monopolistic competition is therefore bad for consumers because

- A) consumers benefit from lower prices.
- B) consumers benefit from an increased variety of products.
- C) consumers benefit because of an increase in quantity available.
- D) consumers benefit from products becoming more homogeneous.
- E) higher production costs means more employment.

*The payoff matrix below shows the payoffs (profits) to Firms 1 and 2 from producing different levels of output. The numbers in parentheses are (payoff to 1, payoff to 2).*

		Firm 2's Output Level	
		Q=3	Q=4
Firm 1's Output Level	Q=3	(16, 16)	(10, 18)
	Q=4	(18, 10)	(12, 12)

TABLE 11-7

34) Refer to Table 11-7. The Nash equilibrium in this game is

- A) (Firm 1: produce Q=3, Firm 2: produce Q=3).
- B) (Firm 1: produce Q=4, Firm 2: produce Q=3).
- C) (Firm 1: produce Q=4, Firm 2: produce Q=4).
- D) (Firm 1: produce Q=3, Firm 2: produce Q=4).
- E) non-existent.

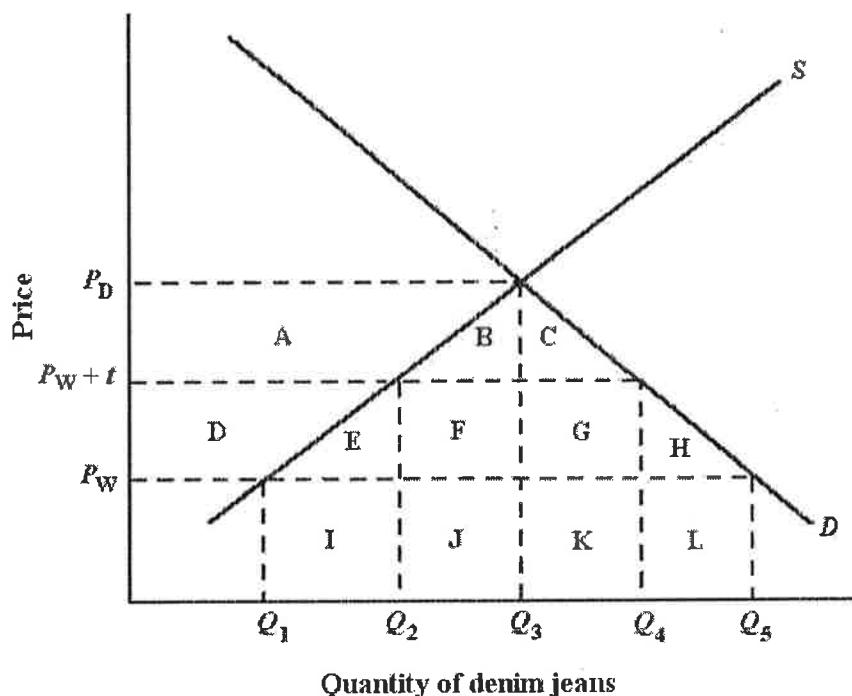
35) Productive efficiency (at the level of the firm) is a goal that is sought

- A) by profit-maximizing firms in all market structures.
- B) only by perfectly competitive firms.
- C) only by profit-maximizing imperfectly competitive firms.
- D) by no firms in any market.
- E) only by profit-maximizing firms in an oligopolistic market structure.

36) An example of the "infant industry" argument for trade protection is that

- A) all tariffs should be eliminated in order to maximize the gains from trade.
- B) tariffs should not be imposed on countries that have democratic governments.
- C) in the presence of unexploited scale economies, tariff protection may permit a country to develop future comparative advantage in certain products.
- D) imports of certain products should be limited in the interests of national defense.
- E) "strategic" trade policy is helpful when other countries are also being strategic.

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



**FIGURE 34-2**

- 37) Refer to Figure 34-2. If Canada imposes a tariff of \$t per pair of jeans, the deadweight loss to the Canadian economy is represented by the area

  - A) E + H.
  - B) E + F + G + H.
  - C) D + E + F + G + H.
  - D) B + C.
  - E) A + B + C.

38) Suppose that the last unit of a factor of production employed has a marginal physical product of 12. The factor's price is \$8, and the product's competitive market output price is \$6. This factor's marginal revenue product is

  - A) \$6.
  - B) \$36.
  - C) \$48.
  - D) \$72.
  - E) \$96.

39) Consider labour that is hired for \$18 per hour. If the last hour hired produces 8 units of output which sells for \$2 per unit, that labour-hour adds \_\_\_\_\_ to the firm's profit and so \_\_\_\_\_ labour should be hired.

  - A) -\$128; more
  - B) -\$2; less
  - C) \$16; less
  - D) \$16; more
  - E) \$0; no

40) If the supply curve for a factor is perfectly elastic, the payments to the factor are

  - A) wholly economic rent.
  - B) wholly transfer earnings.
  - C) partly economic rent and partly transfer earnings.
  - D) neither economic rent nor transfer earnings.
  - E) an unnecessary tax on the factor.

**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 table below shows the resource costs for countries A and B to produce units of goods X and Y. Assume that each country has 40 units of resources.

Resource Cost	Good X	Good Y
Country A	1	2
Country B	2	2

You may wish to use the space below to sketch and keep track of your answers as you work through the series.

- 41) If Country A specializes in producing good Y it will produce \_\_\_\_ units of good Y.  
A) 1      B) 2      C) 10      D) 20      E) 40
- 42) If Country A and Country B both specialize in the production of good X total production will be  
A) 3      B) 6      C) 20      D) 40      E) 60
- 43) Country A has a(n) \_\_\_\_\_ advantage in \_\_\_\_\_.  
A) Absolute, good X  
B) Absolute, good Y  
C) Comparative, good X  
D) Comparative, good Y  
E) A) and C) above.
- 44) Country B has a(n) \_\_\_\_\_ advantage in \_\_\_\_\_.  
A) Absolute, good X  
B) Absolute, good Y  
C) Comparative, good X  
D) Comparative, good Y  
E) B) and D) above.
- 45) The opportunity cost of good Y for Country A is \_\_\_\_\_ and for Country B is \_\_\_\_\_.  
A) 1 units of resources, 2 units of resources  
B) 2 units of good X, 1 unit good X  
C) 2 units of good X, 2 units of good X  
D) 1 unit of good X, 2 units of X  
E) unknowable, unknowable
- 46) Suppose Country A and Country B decide to trade with each other and agree on a trade price of 1.5 units of good X for every unit of good Y. At these terms of trade,  
A) Country A specializes in good X and Country B specializes in good X.  
B) Country A specializes in good Y and Country B may produce both goods.  
C) Country A may produce both goods and Country B specializes in good Y.  
D) Country A specializes in good X and Country B specializes in good Y.  
E) Country A Specializes in good Y and Country B specializes in good X.
- 47) At these same terms of trade the Consumption Possibilities set for Country B will be  
A) Larger than its Production Possibilities set.  
B) Larger than Country A's Consumption Possibilities set.  
C) Larger than Country A's Production Possibilities set.  
D) A) and B) above.  
E) A) and C) above.
- 48) At these same terms of trade suppose that Country B consumes nothing but good X. Country A will consume  
A) 32 units of good Y and 0 units of good X.  
B) 25 units of good Y and 0 units of good X.  
C) 20 units of good Y and 0 units of good X.  
D) 20 units of good Y and 10 good X.  
E) none of the above.

**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 supply and demand curves for vaping, are given by:

$$\text{Supply: } Q_s = -40 + 2P$$

$$\text{Demand: } Q_d = 80 - P$$

Use the space below to work out, sketch, and keep track of your answers as you work your way through the series.

- 49) The price at or above which demand falls to zero (the  $P$  intercept for demand) is  
A) -10                    B) 5                    C) 8                    D) 40                    E) 80
- 50) The free-market equilibrium price and quantity will be  
A)  $(P, Q) = (30, 60)$   
B)  $(P, Q) = (30, 50)$   
C)  $(P, Q) = (50, 30)$   
D)  $(P, Q) = (40, 40)$   
E)  $(P, Q) = (70, 10)$
- 51) At the equilibrium, the elasticity of demand is  
A) 3.00                    B) 2.00                    C) 1.50                    D) 1.00                    E) 0.50
- 52) If new firms were to enter the market  
A) total spending on the good would rise  
B) total spending on the good would fall  
C) total spending on the good would fall, but only if supply was inelastic  
D) total spending on the good would fall, but only if supply was elastic  
E) unless we know how many firms were to enter, we can't tell whether total spending on the good will rise or fall
- 53) Suppose the government sets a minimum price (price floor) in this market equal to 50. The effect of this regulation on the market will be  
A) excess demand of 30 units  
B) excess demand of 60 units  
C) excess supply of 30 units  
D) excess supply of 60 units  
E) nothing
- 54) Given the price floor of 50, the deadweight loss in the market is equal to  
A) 0                            B) 15                            C) 30                            D) 45                            E) 75
- 55) Suppose instead that the government sets a maximum price (price ceiling) in this market equal to 30. The effect of this regulation on the market will be  
A) excess demand of 30 units  
B) excess demand of 60 units  
C) excess supply of 30 units  
D) excess supply of 60 units  
E) nothing
- 56) Given the new price ceiling of 30, the deadweight loss in the market is equal to  
A) 0                            B) 150                            C) 300                            D) 250                            E) 100

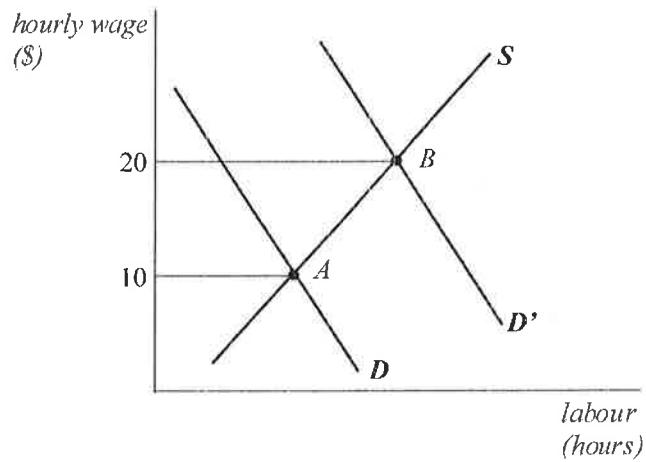
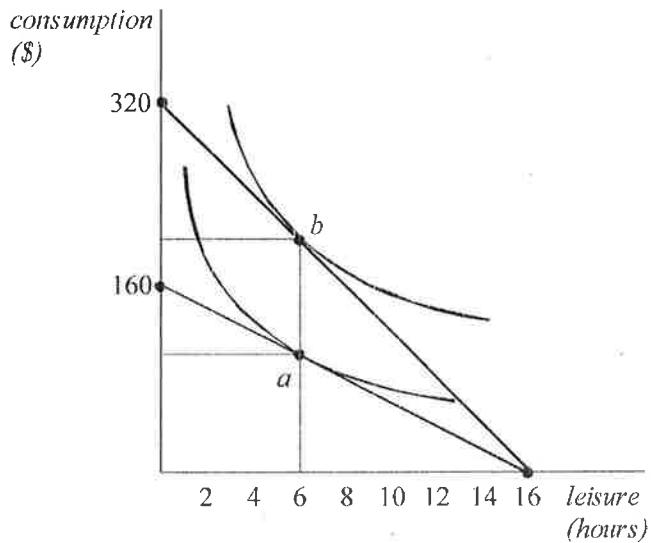
**Part D [8 marks]**

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 top panel below shows the decision of an individual faces when allocating 16 hours per day between leisure and labour (which earns income to spend on consumption).

The lower panel shows the labour market of which the individual is a part. Assume that the market is initially in equilibrium at point A in the lower panel so that the individual faces a wage of \$10/hour.



- 57) Given the wage of \$10/hr, the individual will choose to work  
A) 0 hours      B) 6 hours      C) 8 hours      D) 10 hours      E) 16 hours
- 58) Given his choice of labour, the individual will have consumption of  
A) \$0.00      B) \$60.00      C) \$80.00      D) \$100.00      E) \$160.00
- 59) Suppose labour demand in the market increases, with a new equilibrium at point *B*. This increases the equilibrium wage to \$20/hr. Given the new wage, the individual's choice will result in consumption of  
A) \$60.00      B) \$80.00      C) \$100.00      D) \$120.00      E) \$200.00
- 60) Comparing the individual's choices at wages of \$10/hr and \$20/hr, we can say  
A) the individual considers leisure to be a normal good  
B) the individual considers leisure to be neither a normal good, nor an inferior good  
C) the individual considers leisure to be an inferior good  
D) the individual considers labour to be a normal good  
E) nothing about how the individual views leisure or labour
- 61) When the wage rose from \$10/hr to \$20/hr, then for this individual, regarding the amount of leisure  
A) the negative substitution effect was weaker than the positive income effect  
B) the negative substitution effect was exactly offset by the positive income effect  
C) the negative substitution effect was stronger than the positive income effect  
D) the positive substitution effect was weaker than the negative income effect  
E) the positive substitution effect was exactly offset by the negative income effect
- 62) Over the whole of the range of the wages from \$10/hr to \$20/hr, this individual's labour supply curve is  
A) elastic  
B) backward-bending  
C) horizontal  
D) vertical  
E) non-existent
- 63) Comparing the effect of the wage change on the labour supplied by the individual in diagram with the change in the total labour supplied in the market, we can say that  
A) all other suppliers to the market have stronger substitution effects than income effects  
B) at least some other suppliers to the market have stronger substitution effects than income effects  
C) all other suppliers to the market have weaker substitution effects than income effects  
D) all suppliers to the market have identical substitution and income effects  
E) nothing about the preferences of other suppliers to the market without more information
- 64) Which of the following could be responsible for the increase in the market demand for labour?  
1. an increase in the price of the goods produced by this labour  
2. an increase in the marginal product of labour  
3. a general change in tastes regarding leisure and consumption  
A) 1 only      B) 2 only      C) 3 only      D) 1 and 2 only      E) 1, 2, and 3

**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. Assume that all existing and potential firms in a perfectly competitive industry have cost conditions as described below (where  $q$  is the output level of the firm in a given period):

Total Cost:  $TC = 9 + q^2$ .

Marginal Cost:  $MC = 2q$

Assume initially that there are 120 firms in this industry and that the market demand curve is given by:

Market Demand  $Q^D = 1800 - 240p$

You may find the space below useful to draw diagrams and keep track of your answers.

65) Given that profit-maximizing competitive firms produce at the output level where  $p = MC$ , the supply curve of such a firm is given by:

- A)  $q^S = 2p$
- B)  $q^S = p$
- C)  $q^S = 4p$
- D)  $q^S = \frac{1}{2}p$
- E)  $q^S = \frac{1}{4}p$

66) Given that there are 120 firms in the industry, the industry supply curve is given as:

- A)  $Q^S = 120p$
- B)  $Q^S = 240p$
- C)  $Q^S = 180p$
- D)  $Q^S = 1202p$
- E)  $Q^S = 60p$

67) The short run equilibrium price in this industry is:

- A) 4
- B) 5
- C) 6
- D) 7
- E) 3

68) Assume that the minimum point of the short run ATC curve for all firms is also the minimum point of the long run average cost curve (LRAC). This minimum of a firm's ATC is reached where  $MC = ATC$ . Thus the long run equilibrium price ( $p$ ) and quantity ( $Q$ ) in this market are:

- A) 6; 360
- B) 6; 120
- C) 3; 120
- D) 3; 1080
- E) 5; 600

69) In long run equilibrium, each firm produces an output level equal to:

- A) 6
- B) 5
- C) 4
- D) 3
- E) 2

70) Suppose that a reduction in wages changes costs such that after firms in the industry have adjusted their input mix the total cost function is given as  $TC = 8 + \frac{1}{2}q^2$ . The marginal cost of the firm is now given by  $MC = q$ . Since the LRAC has also shifted down so that its minimum is also the minimum of the new short run average cost function, the new long run equilibrium price in this market is:

- A) 6
- B) 5
- C) 4
- D) 3
- E) 2

71) After wage change, in the new long run equilibrium, every firm will produce an output level equal to:

- A) 8
- B) 7
- C) 6
- D) 5
- E) 4

72) After the wage change, in the new long run equilibrium, the number of firms in the industry is equal to:

- A) 240
- B) 210
- C) 180
- D) 120
- E) 110

**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. A local monopolist produces output with a fixed yearly cost of \$450 and a constant marginal cost of production of \$10. Therefore total cost is given by:  $TC = 450 + 10Q$

She serves a market with a demand curve given by  $Q(P) = 120 - 2P$ . The inverse demand function (i.e. average revenue) for the overall market is therefore  $P(Q) = 60 - (1/2)Q$  and marginal revenue is given by  $MR = 60 - Q$ .

You may find the space below useful to draw diagrams and keep track of your answers.

- 75) The firm collects a total revenue of  
A) \$1,600      B) \$1,350      C) \$1,200      D) \$1,500      E) \$1,750
- 76) The firm makes overall profits of  
A) \$800      B) \$700      C) \$1,200      D) \$1,500      E) \$950
- 77) The overall level of consumers' surplus in this market is given by  
A) \$500      B) \$400      C) \$625      D) \$450      E) \$550
- 78) The government decides to regulate the price charged by this monopolist. The regulator tries to restore market efficiency by requiring the monopolist to set price equal to marginal cost. The outcome of this regulation in the long run will be that  
A) price is set to \$10 and profits are zero.  
B) price is set to \$10 and the firm loses \$100 per year.  
C) price is set to \$20 and profits are 60.  
D) price and quantity stay at the profit maximizing levels.  
E) consumer surplus is zero because the firm stops producing.
- 79) The government decides to regulate the price charged by this monopolist. The regulator tries to restore market efficiency by requiring the monopolist to set price equal to marginal cost but transfers a fixed sum of \_\_\_ to the firm. The firm will make a profit of \_\_\_.  
A) \$600; zero.  
B) \$450; zero.  
C) \$450; \$600.  
D) \$300; \$450.  
E) \$300; - \$50 and the firm stops producing.
- 80) The government decides to regulate the price charged by this monopolist. The regulator tries sets a price ceiling at \$15. The firm will produce the quantity \_\_\_ and make a profit of \_\_\_.  
A) 90; \$900.  
B) 80; \$300.  
C) 60; \$500.  
D) 90; zero.  
E) 70; - \$50 and the firm stops producing.