

QUEEN'S UNIVERSITY AT KINGSTON

FACULTY OF ARTS AND SCIENCE

Department of Economics

ECONOMICS 110/111*

Mid-Year Examination/Final Examination

December 14, 2000

Sections and Instructors:

Economics 110:

Section A Cromb
Section B Biswal
Section C Stewart
Section D: Carmichael

Economics 111:*

Section A Machidon
Section X Morgan

Time Limit:

3 hours

Instructions:

Mark your selections for Part A on the multiple choice answer card in PENCIL.

Write your answers for Parts B and C in the booklets provided. Clearly mark the questions you have answered on the front of the first booklet. Hand in the card for part A inside the answer booklet.

Marking Scheme:

Part A [60 marks]

FORTY multiple-choice - $1\frac{1}{2}$ marks each

Part B [20 marks]

FOUR of six True/False/Uncertain questions - 5 marks each

Part C [20 marks]

ONE of two Problems - 20 marks

Please Note:

If the instructor is unavailable in the examination room and if doubt exists as to the interpretation of any question, the candidate is urged to submit with the answer paper a clear statement of any assumptions made.

Part A Multiple Choice [60 marks]

Answer all 40 questions, each question is worth $1\frac{1}{2}$ marks.

Use the multiple choice answer card provided. Shade IN PENCIL the area corresponding to the best answer. Make sure you put your name and student number on the card, and hand it in inside your answer booklet.

1. The primary implication of scarcity is that:
 - A. one should never wait until tomorrow to buy something that is available today.
 - B. government planning is required to determine how resources are to be used.
 - C. choices must be made.
 - D. the standard of living will decline over time.
 - E. government planning cannot determine how resources are to be used.
2. The market system will not:
 - A. provide individuals with all they want.
 - B. determine how goods are produced.
 - C. determine which goods are produced.
 - D. determine for whom goods are produced.
 - E. allocate scarce resources to alternative uses.
3. Rationing by queues:
 - A. will tend to allocate resources to those with the lowest value of time.
 - B. will only work if individuals do not value their time.
 - C. is an efficient method of allocating resources if all individuals have the same value of time.
 - D. will not work as a method for allocating resources.
 - E. is generally a more efficient method for allocating resources than prices.

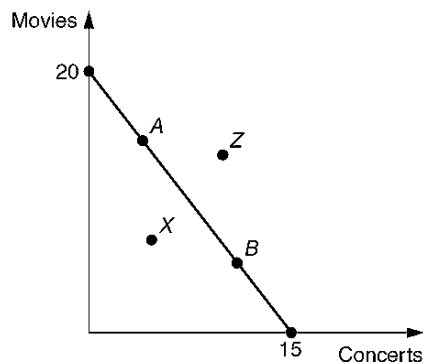


Figure 4 – Information for Question #4

4. Figure 4 shows Christopher's budget constraint. Which of the following statements about the budget constraint is correct?
 - A. Points A and B are attainable; points X and Z are unattainable.
 - B. Point X is attainable; points A, B, and Z are unattainable.
 - C. Points A, B, and X are attainable; point Z is unattainable.
 - D. Points A, B, and Z are attainable; point X is unattainable.
 - E. Points A, B, X, and Z are all attainable.

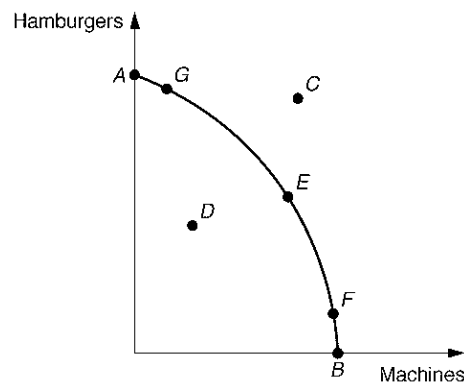


Figure 5 – Information for Question #5

5. Figure 5 shows a country's production possibilities curve defined over hamburgers and machines. If the country is at point G and wants to move to point F, this is only possible if it:
 - A. increases total resources.
 - B. employs currently idle resources.
 - C. uses existing resources more efficiently.
 - D. reallocates resources.
 - E. reduces the prices of its resources.

6. The opportunity cost of an activity is:
 - A. the amount of money spent on the activity.
 - B. the next-best use of the resources devoted to the activity.
 - C. any cost that cannot be recovered.
 - D. the value of the time spent on that activity.
 - E. any cost other than the direct money cost of the activity.

7. We know that voluntary exchange benefits all parties because:
 - A. people are always happy with the exchanges they make.
 - B. exchanges always involve fair prices.
 - C. gains from trade are equally divided among those making the exchange.
 - D. coercion is involved in some exchanges.
 - E. anyone who expected to lose would refuse to make the exchange.

8. If Canada can produce either 200 bushels of corn or 400 bushels of wheat from a given quantity of resources, and the United States, using the same amount of resources, can produce either 40 bushels of corn or 100 bushels of wheat, which of the following statements is true?
 - A. Canada has a comparative advantage in the production of both corn and wheat.
 - B. The United States has a comparative advantage in the production of both corn and wheat.
 - C. Canada has a comparative advantage in the production of corn.
 - D. Canada has a comparative advantage in the production of wheat.
 - E. Neither country has a comparative advantage in the production of either good.

9. All of the following, except one, occur when reduced protectionism results in increased trade between two countries. Which does not?
- Every individual in the two countries gains from the increased trade.
 - Both of the countries gain from the increased trade.
 - The increased trade is mutually beneficial to the two countries since all exchanges are voluntary.
 - The increased trade allows both countries to exploit their comparative advantages.
 - The increased trade leads to increases in the average standards of living in both countries.
10. Assume that the forces of supply and demand operate freely. All of the following statements, except one, are true in this situation. Which is the odd one out?
- When the price of a good rises, producers are encouraged to produce more of the good and consumers are encouraged to purchase less of the good.
 - Prices measure relative scarcity.
 - Prices provide incentives to use scarce resources efficiently.
 - Prices convey critical economic information.
 - When the price of a good rises, producers are encouraged to produce less of the good and consumers are encouraged to purchase more of the good.
11. A fall in the price of Moosehead beer is likely to result in:
- a rightward shift in the demand curves for other makes of beer that are substitutes for Moosehead.
 - a rightward shift in the demand curve for Moosehead.
 - a leftward shift in the demand curve for pizza, a complement.
 - a leftward shift in the demand curve for Moosehead.
 - a leftward shift in the demand curves for other makes of beer that are substitutes for Moosehead.

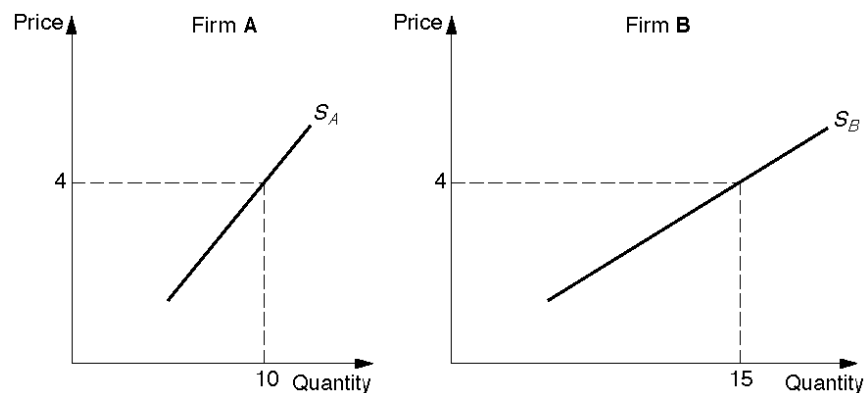


Figure 12 – Information for Question #12

12. Figure 12 shows supply curves for two firms producing the same product. If these are the only two firms in the economy, market supply at a price of \$4 will be:
- 25 units.
 - 20 units.
 - 15 units.
 - 10 units.
 - 5 units.

13. If the price of a product changes by 5 percent, and as a result quantity demanded changes by 2 percent:
- A. demand is price-elastic.
 - B. this can only be the result of a rightward shift of the demand curve.
 - C. the price elasticity of demand is unity.
 - D. this can only be the result of a leftward shift of the demand curve.
 - E. demand is price-inelastic.
14. If a firm lowers the price of its product and finds that total revenue has increased, this indicates that:
- A. demand for the product is price-inelastic.
 - B. demand for the product is price-elastic.
 - C. demand for the product has unit price elasticity.
 - D. the demand curve for the product is downward-sloping.
 - E. the price elasticity is less than 1.
15. A tax has been levied on a product. The more price-elastic the demand for that product is:
- A. the more likely it is that the tax is borne equally by consumers and sellers.
 - B. the greater is the proportion of the tax borne by producers.
 - C. the greater is the revenue that is raised by the tax.
 - D. the greater is the proportion of the tax borne by consumers.
 - E. the more likely it is that the tax will be reflected in a change in price rather than a change in quantity.
16. Which of the following is not a possible consequence of rent controls?
- A. Apartment buildings are abandoned.
 - B. Apartment buildings are converted to condominiums.
 - C. All those who wish to rent apartments at going rents are able to find apartments that are available.
 - D. There is less incentive for the construction of new apartments.
 - E. There is a shortage of available apartments, and the shortage becomes larger in the long run.
17. Bob buys only bottles of beer and pizzas. A bottle of beer costs \$2 and pizzas are \$8 each. The relative price of a pizza is _____ beers.
- A. 0.25 B. 2 C. 4 D. 8 E. 16
18. The substitution effect of a price increase causes an individual to purchase fewer units of a good because
- A. the change in price causes a decline in purchasing power.
 - B. the good becomes less expensive relative to all other products.
 - C. the consumer now has less money to spend.
 - D. the good becomes more expensive relative to all other products.
 - E. the change in price causes an increase in purchasing power.
19. Katy is willing to pay \$20 for the first tee-shirt she buys, \$35 for the first two tee-shirts, and \$45 for the first three tee-shirts. If the price of tee-shirts is \$10, Katy's total consumer surplus is:
- A. \$0. B. \$5 C. \$10 D. \$15 E. \$20

20. When the wage rate increases, the price of an hour's leisure:
- increases.
 - remains constant.
 - decreases.
 - is indeterminate.
 - is irrelevant.
21. As the wage rate increases, the substitution effect:
- reduces leisure time and the income effect reinforces the substitution effect.
 - increases leisure time and the income effect reinforces the substitution effect.
 - reduces leisure time and there is no income effect.
 - increases leisure time and the income effect opposes the substitution effect.
 - reduces leisure time and the income effect opposes the substitution effect.
22. When the interest rate increases, the present discounted value of \$100 in a year's time:
- rises.
 - falls.
 - remains constant.
 - may rise or fall.
 - is unaffected.

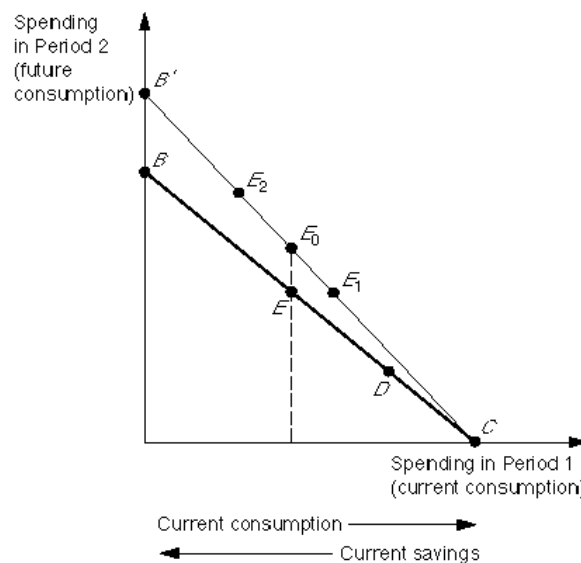


Figure 23 – Information for Question #23

23. Figure 23 shows an individual's two-period budget constraint before and after a change in the interest rate. If the individual chose E on the original budget constraint and E0 on the new budget constraint, this indicates that the:
- substitution effect exactly offset the income effect.
 - change in the interest rate increased savings.
 - change in the interest rate decreased savings.
 - substitution effect dominated the income effect.
 - income effect dominated the substitution effect.

24. With 50 units of labour, a firm can produce 1,800 units of output; with 60 units of labour the firm can produce 2,100 units of output. The marginal product of an extra unit of labour is:
 A. 3. B. 30. C. 35. D. 36. E. 300.
25. Which of the following statements about fixed costs is correct?
 A. They are the costs associated with variable inputs, and they do not vary with output.
 B. They are the costs associated with variable inputs, and they vary with output.
 C. Fixed costs plus overhead costs equal total costs.
 D. They are the costs associated with fixed inputs, and they vary with output.
 E. They are the costs associated with fixed inputs, and they do not vary with output.
26. Which of the following is true of marginal cost when marginal product is decreasing?
 A. It is increasing initially and decreasing eventually.
 B. It is increasing.
 C. It is constant.
 D. It is decreasing.
 E. It is decreasing initially and increasing eventually.
27. Which of the following is most likely to be a long-run adjustment on the part of a firm?
 A. adding an extra shift of workers
 B. building a new factory
 C. increasing the amount of overtime for existing workers
 D. increasing the amount of irrigation to a crop that is already planted
 E. laying off workers for a week
28. For a firm in a competitive market:
 A. marginal revenue equals price.
 B. marginal revenue equals total revenue.
 C. marginal revenue minus price is positive and constant.
 D. the firm has no control over the output it sells.
 E. average revenue falls with output.
29. If a firm operating in a competitive market faces a situation in which marginal cost exceeds marginal revenue:
 A. the firm's profit will stay constant if it increases output.
 B. the firm will increase profit if it increases output.
 C. the firm will increase profit if it reduces output.
 D. the firm will reduce profit if it reduces output.
 E. the firm must be making a loss.

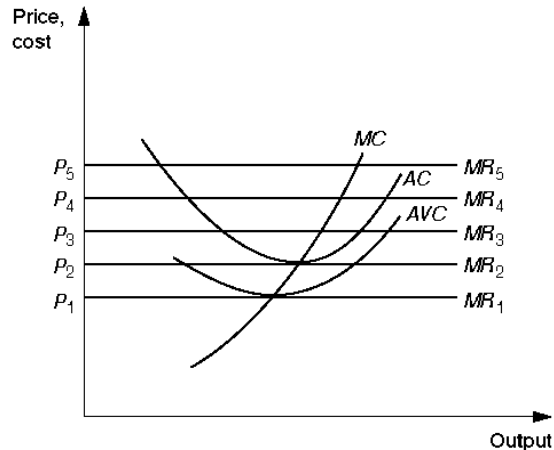


Figure 30 – Information for Question #30

30. Figure 30 shows a profit-maximizing firm's cost curves, and a variety of different marginal revenue curves. All the firm's fixed costs are sunk costs. In the short-run the firm will remain in the market so long as price exceeds _____.
 A. P_1 B. P_2 C. P_3 D. P_4 E. P_5
31. When economists state that competition drives profits to zero, they mean that:
 A. no existing firm can increase long-run profits by increasing production, though it may be profitable for new firms to enter the market.
 B. existing firms can increase long-run profits by increasing production, but it is not profitable for new firms to enter the market.
 C. the marginal existing firm can increase long-run profits by increasing production, though other existing firms cannot, nor is it profitable for new firms to enter the market.
 D. no existing firm can increase long-run profits by increasing production, and it is not profitable for new firms to enter the market.
 E. existing firms can increase long-run profits by increasing production, and it may be profitable for new firms to enter the market.
32. A general equilibrium analysis of an increase in the corporate income tax would conclude that:
 A. those on whom the tax is levied always pay the tax.
 B. only rates of return on investments in the corporate sector are affected.
 C. those who pay the tax are not necessarily those on whom the tax is levied.
 D. only profit margins in the corporate sector are affected.
 E. consumers of goods produced by the corporate sector are unaffected.
33. Whenever the impact of an initial change is widely dispersed among many markets, each of which is affected only slightly:
 A. general equilibrium analysis is likely to lead to incorrect conclusions.
 B. general equilibrium analysis will lead to partially erroneous conclusions.
 C. general equilibrium analysis is required.
 D. partial equilibrium analysis will lead to generally erroneous conclusions.
 E. partial equilibrium analysis will provide reasonably reliable predictions.

34. For a monopolist, the marginal revenue from selling one more unit equals:
- A. the price it receives from the sale of that unit.
 - B. the loss in revenues from the sale of all other units at the new lower price.
 - C. the price it receives from the sale of that unit minus the loss in revenues from the sale of all other units at the new lower price.
 - D. the price of the unit, less the wages paid to the worker who produces it.
 - E. the price of the unit, less what it cost to produce.

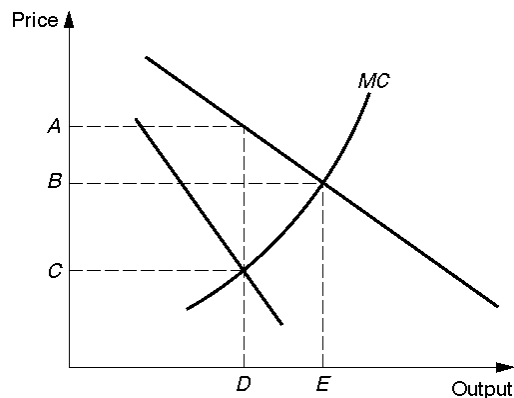


Figure 35 – Information for Question #35

35. Figure 35 shows a monopolist's demand, marginal revenue, and marginal cost curves. The profit maximizing price is at point _____, and the profit maximizing output is at point _____.
- A. A; E
 - B. B; D
 - C. C; D
 - D. B; E
 - E. A; D
36. If a cartel breaks down, the result will be:
- A. a higher price and a lower output.
 - B. a higher price and a higher output.
 - C. a lower price and a higher output.
 - D. a lower price and a lower output.
 - E. no change in price or output.

Time in jail if:		Bonnie	
		<i>Confesses</i>	<i>Remains Silent</i>
Clyde	<i>Confesses</i>	Bonnie: 3years Clyde: 3Years	Bonnie: 6 years Clyde: 6 months
	<i>Remains Silent</i>	Bonnie: 6 months Clyde: 6 years	Bonnie: 1 year Clyde: 1year

Table 37 – Information for Question #37

37. Table 37 shows a typical Prisoner's Dilemma game. For example, if Bonnie confesses but Clyde does not, she gets six months in jail but he gets six years. If both confess, each gets three years, and if neither confesses, they can be found guilty only of a lesser charge and each gets only one year in jail. If each chooses a strategy that is superior regardless of what the other chooses, the outcome is that:
- Bonnie and Clyde each spend one year in jail.
 - Bonnie spends six months in jail, and Clyde goes to jail for six years.
 - Bonnie and Clyde each spend three years in jail.
 - Bonnie spends six years in jail, and Clyde goes to jail for six months.
 - Bonnie and Clyde are found not guilty.
38. In what sense is a monopolist's output viewed by economists as too low?
- The profit-maximizing output is less than the equilibrium level.
 - At the profit-maximizing output, the consumer's marginal benefit from the last unit sold exceeds the unit's marginal cost.
 - There is excess demand for the product because the profit-maximizing output cannot meet the consumers' demand at the profit-maximizing price.
 - The profit-maximizing price does not bring forth an output such that the market clears.
 - At the profit-maximizing output, the monopolist cannot make a profit.
39. One drawback of monopoly is the practice of rent-seeking behaviour, an example of which occurs when:
- a firm tries to increase the rents it charges on property it owns.
 - a government tries to expropriate a firm's monopoly rents.
 - a firm devotes resources to deter entry.
 - a firm buys another firm that also enjoys monopoly rents.
 - a government tries to find out the size of a firm's monopoly rents.
40. If a regulatory body imposed marginal cost pricing on a natural monopoly, the:
- firm will make a profit but it will not be able to maximize profits.
 - level of output will exceed what is needed at that price to clear the market.
 - firm will have to be subsidized since it will incur losses.
 - firm will not be producing at an efficient output level.
 - firm will make zero profit.

Part B True/False/Uncertain

20 marks - Each question answered is worth 5 marks.

Answer FOUR of the following six questions.

Explain why the following statement is True, False, or Uncertain according to economic principles. **Use diagrams where appropriate.** Unsupported answers will receive no marks. It is the explanation that is important.

- B1.** An increase in the wholesale price of milk leads to an increase in the price of milkshakes.
- B2.** The table below shows how much labour is needed to produce a case of wine *or* a case of beer in France and Britain. France has an absolute advantage over Britain in the production of both goods, therefore Britain cannot benefit by trading with France.

	Britain	France
Labour needed to produce a case of Beer	2	1
Labour needed to produce a case of wine	10	4

- B3.** To increase its revenue, the Kingston bus company should increase the price of a bus ride.
- B4.** An increase in the tax rate on savings income (that is tax paid on interest income earned) will cause an individual to save less.
- B5.** In the short-run, an increase in the wage rate faced by a perfectly competitive industry is fully absorbed by the firms in the industry, that is, there is no increase in the price of the product.
- B6.** In the long-run, an industry that is characterized by *monopolistic competition* will be composed of firms that are profit maximizing by producing where marginal cost equals marginal revenue, but profits will equal zero because price equals average cost.

Part C Problems

20 marks - Each part worth 5 marks

Answer ONE of the following two questions.

- C1.** Suppose a student has \$200 per month to spend on cappuccino and CDs. Assume initially that the price of cappuccino is \$2 per cup and that the price of CDs is \$20.
- (a) In a diagram with cups of cappuccino on the vertical axis and CDs on the horizontal axis, illustrate the student's budget line. What is the opportunity cost of a CD? Using an indifference curve, illustrate the choice of the student who chooses to consume 5 CDs per month. How many cups of cappuccino are consumed?
 - (b) Suppose the student experiences an increase in income to \$300 per month. Illustrate the new budget line and a new consumption point assuming that both cups of cappuccino and CDs are normal goods. Is the student better off? Explain.
 - (c) Now return to the original income level. Illustrate the effect on the budget line if the price of CDs decreases to \$10. Briefly explain the substitution and income effects. Is the student better off? Explain.
 - (d) Suppose that, in response to the price change described above in part (c), the student ends up consuming more of both goods than was the case in part (a). From this information, can you infer whether or the student's demand curve for CDs is elastic or inelastic? Explain. [Hint: Determine whether the student is spending more or less on each of the goods.]
- C2.** Suppose the demand and marginal revenue curves for a monopolist are as given below.
- Demand Curve: $P = 22 - Q$ Marginal Revenue: $MR = 22 - 2Q$,
- where P is price, MR is marginal revenue and Q is quantity. Note that the demand curve has been written with price as a function of quantity. Assume that the firm has marginal and average costs equal to \$10
- (a) Calculate the profit maximizing quantity and price for the monopolist. Illustrate in a diagram. How much profit does the firm make? Illustrate in your diagram.
 - (b) Is this monopoly outcome efficient? If not, what is the efficient output level in this market (the amount that would be produced under perfect competition)? Calculate, illustrate, and explain the deadweight loss.
 - (c) In part (a) you identified the monopoly profits. In most markets, the existence of profits would lead to a change in the industry. What change would normally take place? Briefly explain two conditions that might stop the change from taking place.
 - (d) Suppose that this "monopoly" is really two identical firms who are forming a cartel. Suppose each firm is considering whether or not to continue to produce one half of the "monopoly" output level or to cheat on the cartel and produce two thirds of the "monopoly" output level. Analyze this decision for the firms and explain what the outcome would be. [Hint: Firms are concerned about the profitability of their own action, given what the other firm does.]