QUEEN'S UNIVERSITY AT KINGSTON
FACULTY OF ARTS AND SCIECE
Department of Economics
ECONOMICS 111S - Final Examination
August, 2004

Instructor: Sharif F. Khan

Time Limit: 3 Hours

Instructions:

Important! Read the instructions carefully before you start your exam.

Mark your selections for **PART A** on the multiple choice answer card in PENCIL. If you make changes, be sure to erase completely. Please record your name and student number on the multiple choice answer card. Hand in the card inside your answer booklet.

Write your answers for **Part B** and **Part C** in the booklet provided. Record only your student number on the booklet. Hand in the card for Part A inside the answer booklet.

Marking Scheme:

Part A [60 marks] FOURTY multiple-choice questions – 1.5 marks each

Part B [20 marks] FOUR of SIX True/ False/Uncertain questions- 5 marks each

Part C [20 marks] ONE problem solving question

Calculators:

Non-programmable calculators are permitted (Examples: those with Blue and Gold stickers and the pre-approved Casio 991)

Notes:

- If doubt exists as to the interpretation of any question, then for any question requiring a written answer the candidate is urged to submit with the answer paper a clear statement of any assumptions made.

- You are NOT ALLOWED to use any textbooks, notes or other study materials. Academic dishonesty is a serious academic offence. With respect to examinations and tests, Academic Regulation 12 of the Faculty of Arts and Science includes the following in its list of prohibited activities: "impersonating another student, copying from another student, making information available to another student, communicating with another student, or possessing unauthorized material." A finding of academic dishonesty carries penalties that may include expulsion from the University.

Part A   Multiple-Choice Questions   [60 marks]

*Each question is worth 1.5 marks. There is no negative marking for wrong answers.*

Answer all questions on the multiple choice answer card in PENCIL. *If you make changes, be sure to erase completely. Please record your name and student number on the multiple choice answer card. Hand in the card inside your answer booklet.*

To answer each question correctly, you have to choose the best answer from the given four choices.

1.   Scarcity exists when
        A.   there is less than an infinite amount of a resource or good.
        B.   there is less of a good or resource available than people wish to have.
        C.   society cannot meet the wants of every individual.
        D.   b and c

2.   Which of the following is not one of the four principles of individual decision making?
        A.   Rational people make decisions based on average cost.
        B.   People respond to incentives.
        C.   People face tradeoffs.
        D.   The cost of something is what you give up to get it.

3.   A marginal change is
        A.   a large, significant adjustment.
        B.   movement from one margin to another.
        C.   a trend over time.
        D.   a small incremental adjustment.
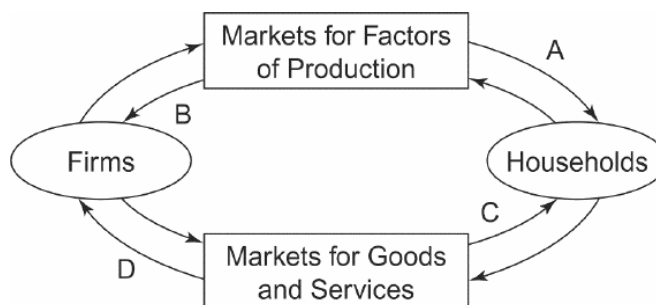
4.   In the circular-flow diagram shown, which arrow shows the flow of goods and services?
        A.   A
   B.   B
        C.   C
        D.   D
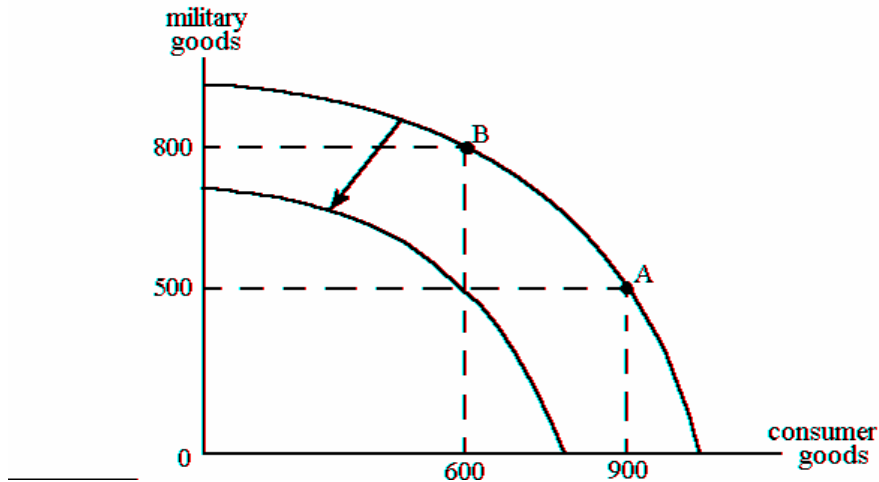
5. In the production possibilities graph shown, what is the opportunity cost of the movement from point A to point B?
   A. 900 consumer goods
   B. 600 consumer goods
   C. 300 consumer goods
   D. 300 military goods

The figures below illustrate the number of personal computers (PCs) and hamburgers than can be produced with 100 labour hours in Taiwan and Germany.
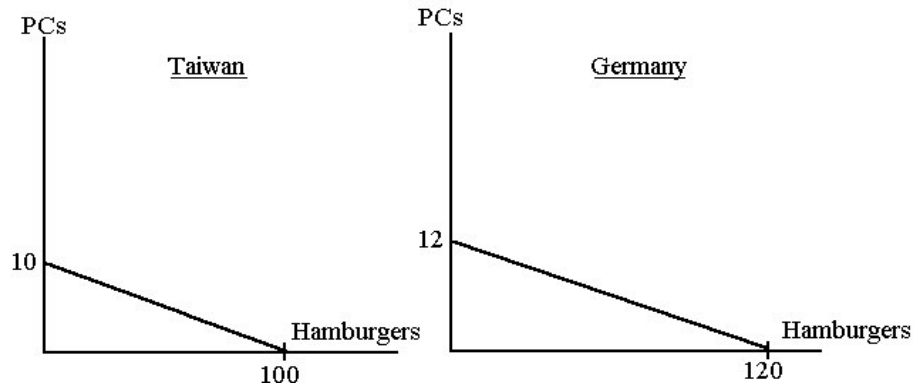

6. If Taiwan and Germany trade based on the principle of comparative advantage, Taiwan will import _____ and Germany will export _____.
   A. PCs, PCs
   B. hamburgers, hamburgers
   C. both goods, neither good
   D. Germany and Taiwan cannot benefit from trade.

7.   Suppose that a decrease in the price of X results in less of good Y sold. This would mean that X and Y are
      A.   complementary goods.
      B.   substitute goods.
      C.   unrelated goods.
      D.   normal goods.

8.   In market economies,
      A.   prices guide economic decisions and thereby allocate scarce resources.
      B.   prices ensure that quantity supplied and quantity demanded are in balance.
      C.   prices determine how much of a good buyers choose to purchase and how much sellers choose to produce.
      D.   all of the above answers are correct

9.   Suppose that the price of product X is reduced from $1.10 to $.90 and, as a result, the quantity of X demanded increases from 1900 to 2100. The demand for X in the given price range
      A.   has decreased.
      B.   is unit elastic (midpoint method).
      C.   is elastic (midpoint method).
      D.   is inelastic (midpoint method).

10.   If the price elasticity of demand for a good is 1.22, then a 10 percent increase in price would be expected to result in a
      A.   1.22 percent decrease in the quantity demanded.
      B.   1.22 percent increase in the quantity demanded.
      C.   12.2 percent decrease in the quantity demanded.
      D.   122 percent decrease in the quantity demanded.

11.   Suppose that good X has an income elasticity of -2.50. This implies that the good is
      A.   a normal good.
      B.   a necessity good.
   C.   an inferior good.
      D.   a luxury good.
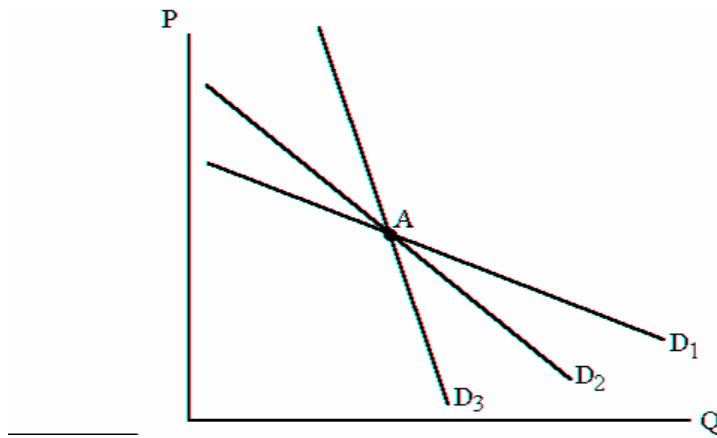
12.   A given increase in price would result in the largest increase in total revenue on demand curve
        A. D_1
        B. D_2
        C. D_3
        D.   It is impossible to answer the question with the information given.
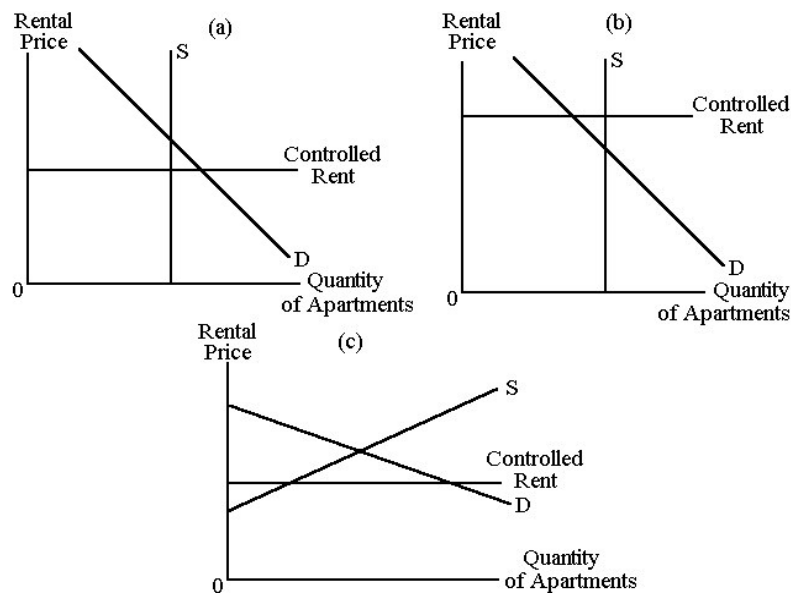

13.   In the figure shown, which panel(s) best represent(s) a binding rent control in the long run?
        A.   panel (a)
        B.   panel (b)
        C.   panel (c)
        D.   none of the panels

The figure below shows the effect on the market of a tax levied on buyers:
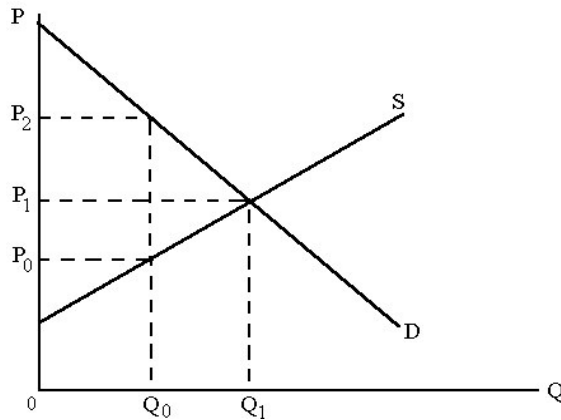
14.   In the figure shown, the price buyers pay after the tax is
       A. P_0.
       B. P_1.
       C. P_2.
       D.   none of the above

15.   The price of Pepsi falls sharply. As a result, we would expect to observe that the equilibrium market price of Coke _____, the equilibrium market quantity of Coke sold _____, and producer surplus in the Coke market _____.
       A.   increases, increases, increases
       B.   increases, increases, decreases
       C.   increases, decreases, decreases
       D.   decreases, decreases, decreases

16.   A technological breakthrough occurs in the production of televisions. As a result, we would expect to observe that the equilibrium price of televisions _____, the equilibrium quantity of televisions sold _____, and producer surplus in the television industry _____.
       A.   increases, increases, increases
       B.   decreases, decreases, decreases
       C.   decreases, increases, increases
       D.   increases, decreases, decreases

Use the graph below to answer questions 17 and 18. In the graph drawn below, $4 is the free market equilibrium price. The area of a triangle is equal to 1/2 x base x height.
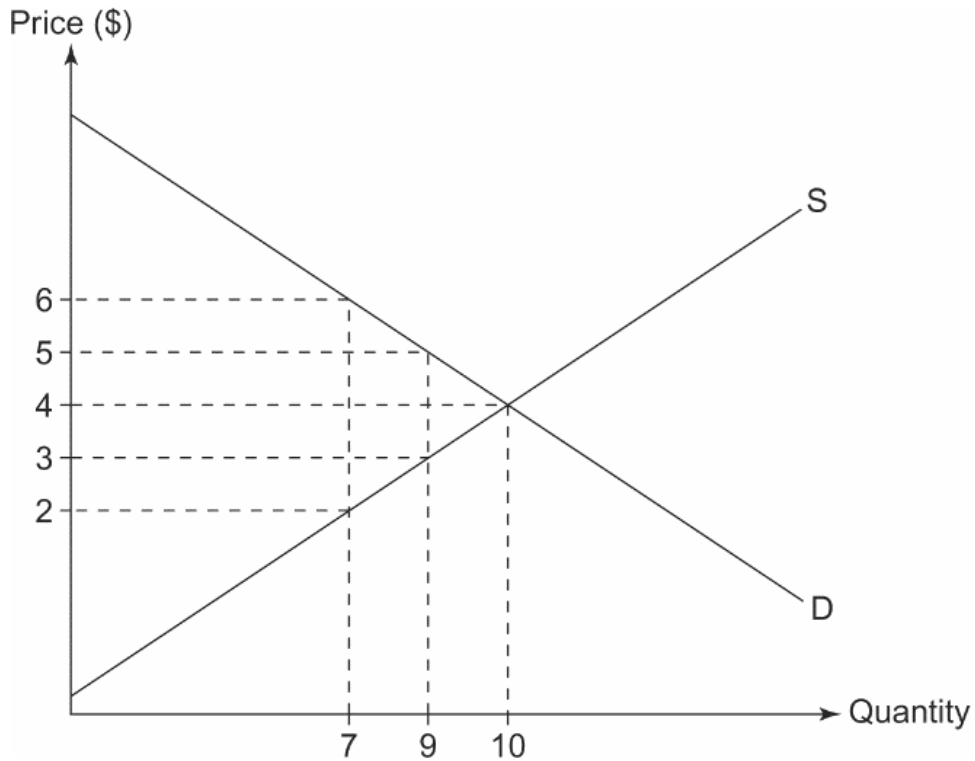

17.   Using the graph, a tax of $2 per unit creates a deadweight loss equal to
        A. $10
        B. $1
        C. $0
        D. $0.50

18.   Using the graph, a tax of $2 per unit generates tax revenue of
        A. $18
        B. $10
        C. $4
        D. $2

Use the following graph to answer questions 19 and 20.
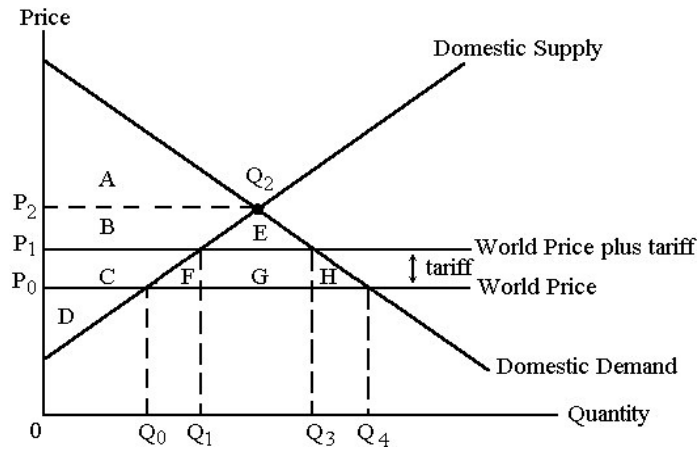
19.   In the figure shown, the free-trade equilibrium domestic price is _____ and the
       equilibrium domestic quantity consumed is _____.
       A. P_0, Q_0
       B. P_1, Q_1
       C. P_2, Q_2
       D. P_0, Q_4

20.   In the figure shown, as a result of the tariff, consumer surplus _____ by
       _____, producer surplus _____ by _____, government tariff revenue is
       _____, and deadweight loss is _____.
       A.   increases, F + G + H, decreases, C, G, E
       B.   decreases, C + F + G + H, increases, C, G, F + H
       C.   decreases, C + F + G + H, increases, C, F + G + H, zero
       D.   increases, C + F + G + H, decreases, C, F + G, H

21.   The marginal product of capital
       A.   is equal to the increase in capital necessary to generate a one-unit increase in
             output.
       B.   is equal to the increase in output obtained solely from a one-unit increase in
             capital.
       C.   is equal to the incremental profit associated with accessing funds in the stock
             market.
       D.   is equal to the incremental cost of equity financing.

Output (a) Output (b)

Labour Labour

Output (c) Output (d)
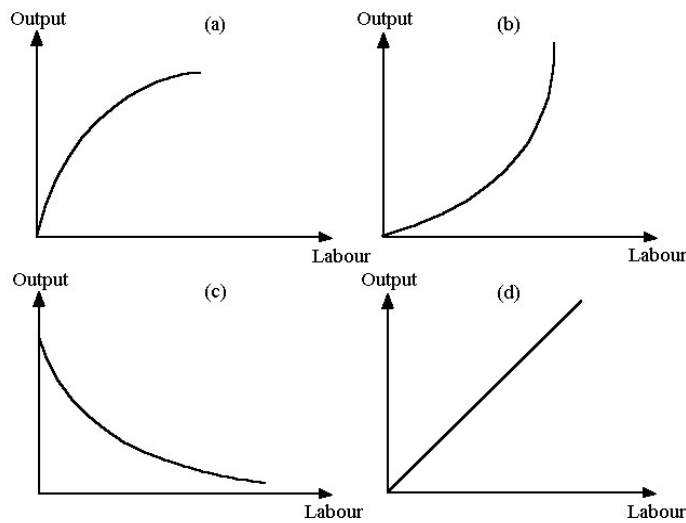
Labour Labour

22. Which of the production curves shown best reflects diminishing marginal product of labour?
   A. Panel a
   B. Panel b
   C. Panel c
   D. Panel d

Measure of Cost for ABC Inc. Widget Factory

Quantity of Widgets	Fixed Costs	Variable Costs	Total Costs
0	$10		
1		$1	
2		$3	$13
3		$6	$16
4		$10	
5			$25
6	$10	$21	

23. Refer to the table above. What is the total cost and marginal cost of producing one widget?
   A. Neither can be determined from the information given.
   B. $1.00 and $1.00 respectively
   C. $11.00 and $11.00 respectively
   D. $11.00 and $1.00 respectively

24.   A perfectly competitive market is characterized by which of the following attributes?

        (i) many buyers and many sellers
        (ii) barriers to entry
        (iii) goods offered for sale are largely the same
        (iv) price takers
        A.   (i), (ii), and (iv)
        B.   (i) only
        C.   (i), (iii), and (iv)
        D.   all of the above
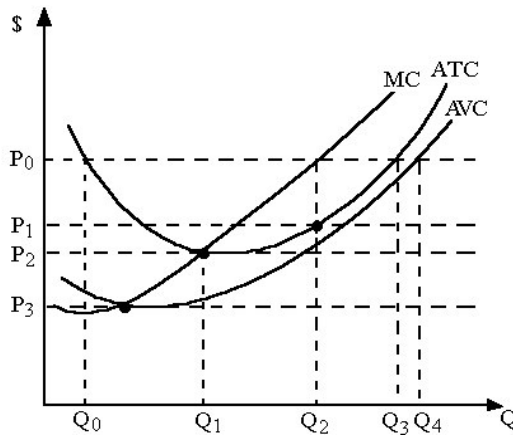
25.   If a profit-maximizing firm is faced with a market price of P_0, it will receive economic profits equal to
   A. $(P_0 - P_1) * Q_4$.
        B. $(P_0 - P_2) * Q_4$.
        C. $(P_0 - P_1) * Q_2$.
        D. $(P_1 - P_2) * Q_2$.

26.   In the long run all of a firm's costs are variable. In this case the shutdown criterion is
        A.   Average Revenue > minimum of Marginal Cost.
        B.   Price < minimum of Average Total Cost.
        C.   Price > minimum of Average Total Cost.
        D.   Average Revenue > maximum of Average Fixed Cost.

27.   Characteristics of a monopoly include:
        (i) sole seller of its product
        (ii) product does not have close substitutes
        (iii) generates large economic profits from economic enterprise
        (iv) is located in a small geographic market
        A.   (i), (iii), and (iv)
        B.   Both (i) and (iii)
        C.   Both (i) and (ii)
        D.   all of the above
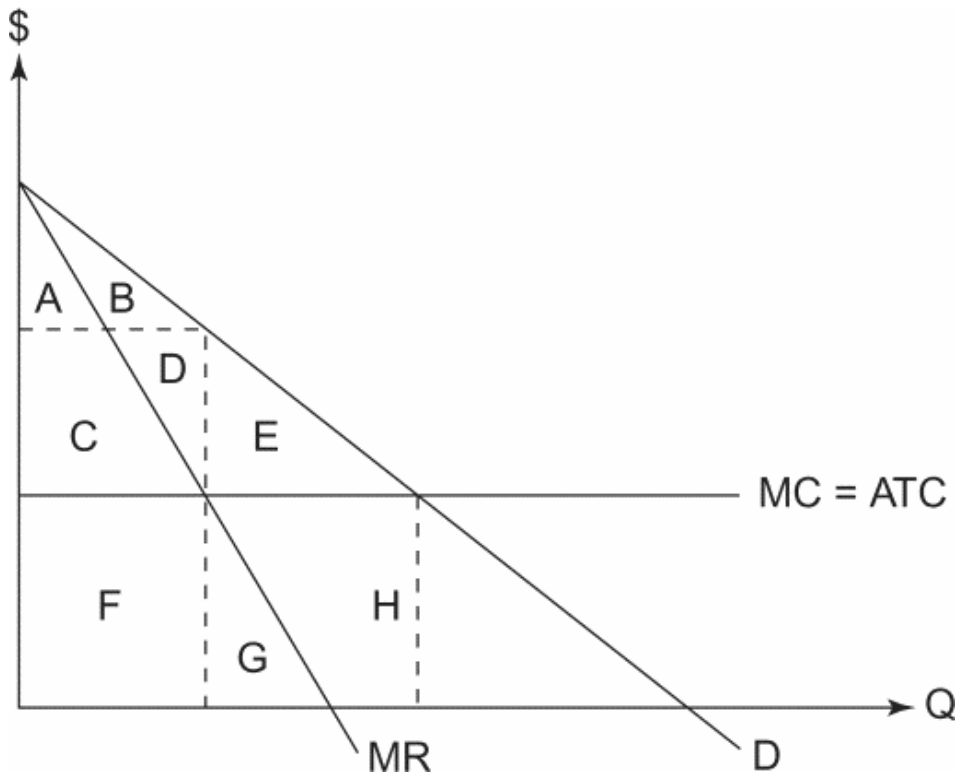
28. Refer to the diagram above. A monopolist who is able to engage in perfect price discrimination will have profit equal to
A. A + C.
B. B + D + E.
C. C + D + F.
D. A + B + C + D + E.

29. One characteristic of an oligopolistic market structure is
A. firms in the industry are typically characterized by very diverse product lines.
B. products typically sell at a price that reflects their marginal cost of production.
C. the actions of one seller can have a large impact on the profitability of other sellers.
D. since markets are typically large, the actions of one seller largely go unnoticed by its competitors.

Each year the United States considers renewal of Most Favored Nation (MFN) trading status with China. Historically, legislators have made threats of not renewing MFN status because of alleged human rights abuses in China. The non-renewal of MFN trading status is likely to involve some retaliatory measures by China. The Game below reflects the potential economic gains associated with a two-outcome game in which China may impose trade sanctions against U.S. firms and the U.S. may not renew MFN status with China.

The table of dollar value (in billions of dollars) of all trade flows for the United States and China under two trade relationship scenarios is given below.

		China	
		Imposes trade sanctions against United States firms	Does not impose trade sanctions against United States firms
United States	Does not renew MFN status with China	U.S.- $65 China- $75	U.S.- $140 China- $5
	Does renew MFN status with China	U.S.- $35 China- $285	U.S.- $130 China- $275

30. When this game reaches a Nash equilibrium, the dollar value of trade flows will be
    A.   United States $140 and China $5.
    B.   United States $65 and China $75.
    C.   United States $35 and China $285.
    D.   United States $130 and China $275.

31. Given the following "Advertising Game," what would be the profit for each firm if they collude and if they each realize that they will be repeating this game indefinitely?

Export A's Decision

	Advertise	Don't Advertise

| | Advertise | $3 billion profit for each | Export A: $ 2 billion profit
Du Maurier: $5 billion profit |

du Maurier's Decision

Don't Advertise   Export A: $5 billion profit
                   du Maurier: $2 billion profit $4 billion profit for each

   A. $4 billion profit each
   B. $3 billion profit each
   C.   Export A: $5 billion profit, du Maurier: $2 billion profit
   D.   Export A: $2 billion profit, du Maurier: $5 billion profit

32.   Monopolistic competition is characterized by which of the following attributes?

    (i) many sellers
   (ii) product differentiation
  (iii) barriers to entry
    A.   (i) and (iii) only
    B.   (i) and (ii) only
   C.   (ii) and (iii) only
    D.   all of the above
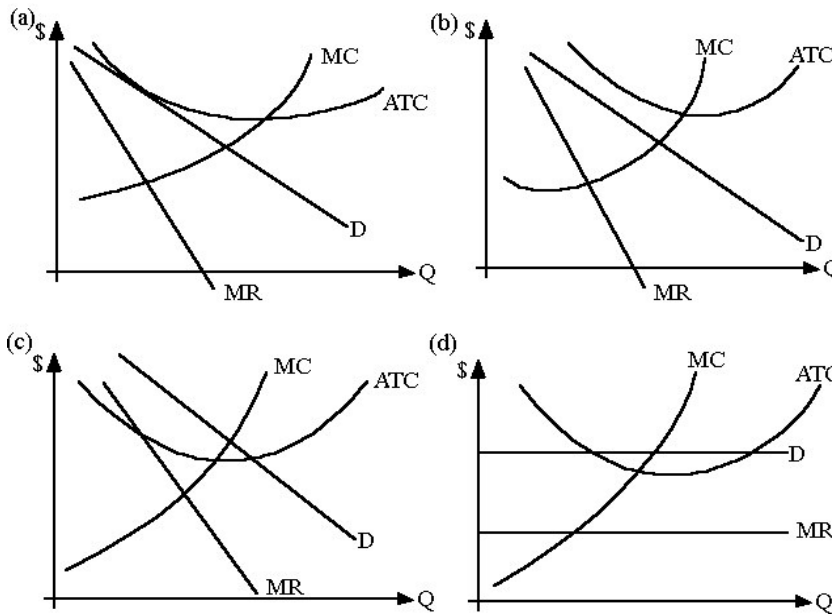
33.   Which of the panels shown reflects a long-run equilibrium in a monopolistically
        competitive market?
        A.   Panel a
        B.   Panel b
        C.   Panel c
   D.   Panel d

34.   For a monopolistically competitive firm in long-run equilibrium _____
        like in a monopoly market, and _____ like in a competitive
        market.
        A.   price equals average total cost, price exceeds marginal cost
        B.   marginal revenue equals marginal cost, average revenue exceeds average total
                cost
        C.   average revenue exceeds average total cost, marginal revenue exceeds average
                revenue
        D.   price exceeds marginal cost, price equals average total cost

35. Which of the following best illustrates the concept of "derived demand"?
    A.   An increase in the wages of autoworkers will lead to an increase in the demand for robots in automobile factories.
    B.   An auto firm's decision to supply more mini-vans results from a decrease in the demand for station wagons.
    C.   An increase in the price of gasoline will lead to an increase in the demand for small cars.
    D.   An automobile firm's decision to supply more cars will lead to an increase in the demand for autoworkers.

36. When labour is a firm's only variable input in its production process, a profit-maximizing firm will employ workers up to the point where
    A.   wage > value of marginal product.
    B.   output price = wage / marginal product of labour.
    C.   output price > wage / marginal product of labour.
    D.   output price < wage / marginal product of labour.
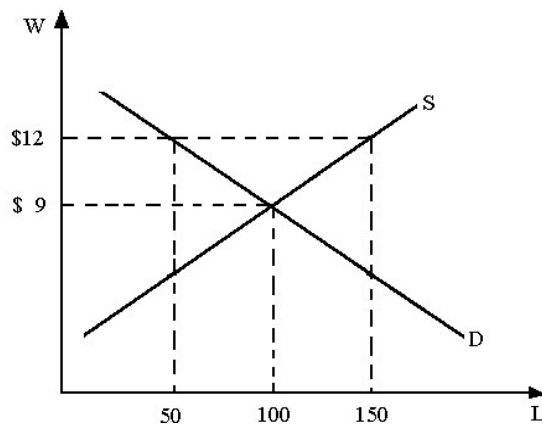
37. If this perfectly competitive labour market experienced a decrease in labour supply, the new equilibrium would occur at
    A.   a wage above $9, and employment above 100.
    B.   a wage above $9, and employment below 100.
    C.   a wage below $9, and employment above 100.
    D.   a wage below $9, and employment below 100.
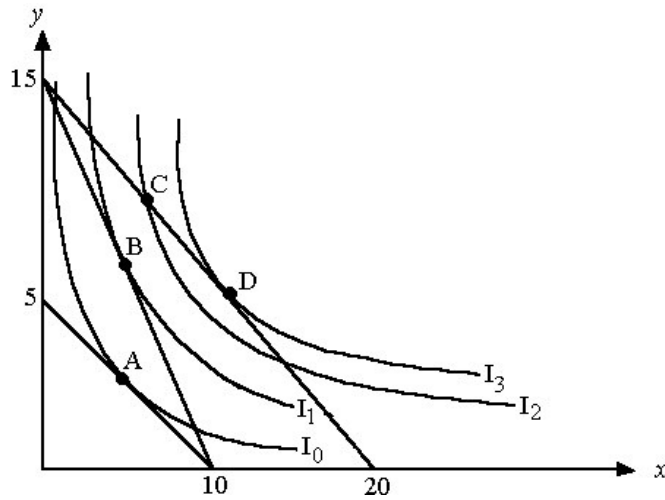
38.   Assume that the consumer depicted in the graph has an income of $100, and faces prices Px= $10, and Py= $20. This consumer will choose a consumption bundle where the marginal rate of substitution is
        A.   2.
        B.   2/3.
        C.   1/2.
        D.   1/3.

39.   Assume that the consumer depicted in the graph has an income of $150, and faces prices Px= $15, and Py= $10. This consumer will choose to optimize by consuming
        A.   Bundle A.
        B.   Bundle B.
        C.   Bundle C.
        D.   Bundle D.

40.   Assume that the consumer depicted in the graph faces prices and income such that she optimizes at point B. What changes would be associated with the consumer finding a new optimization at point D?
        A.   a decrease in the price of commodity x
        B.   an increase in the price of commodity x
        C.   an increase in the price of commodity y
        D.   a decrease in the price of commodity y

Part B   True/ False/ Uncertain Questions   [20 marks]

Each question is worth 5 marks.

Answer four of the following six questions in the answer booklet.

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

B1   An increase in the price of steel leads to an increase in the price of automobiles.

B2   The labor supply curve for an individual is upward sloping.

B3   In the short-run equilibrium, a profit-making competitive firm earns zero economic profit.

B4   In the long-run equilibrium a profit-making monopolistically competitive firm earns a positive economic profit.

B5   According to the theory of consumer choice, the demand curve of a good is always downward sloping.

B6   The marginal-cost curve crosses the average-total-cost curve at the minimum of average total cost.

Part C   **Problem Solving Question**   **[20 marks]**

This section is worth 20 marks.

Answer all parts of this question in the answer booklet.

Suppose the demand and cost conditions facing a monopoly are given by:

Demand:	$p = 120 - q$	Marginal Revenue:	$MR = 120 - 2q$
Total Cost:	$C = 500 + 20q$	Marginal Cost:	$MC = 20$

C1   Calculate the monopoly output level, the monopoly price, and the profits of the firm. [5 marks]

C2   Draw a diagram to illustrate your answers to part (a). [5 marks]

C3   Explain, illustrate and calculate the deadweight loss from monopoly. [5 marks]

C4   Calculate and illustrate the equilibrium price and quantity, the monopoly profit or loss, and the government subsidy if the regulator imposes marginal-cost pricing. Comment on the deadweight loss with this pricing policy.
[5 marks]