CARLETON UNIVERSITY

MIDTERM
EXAMINATION
DECEMBER 2009

DURATION: 2.5 HOURS **No. of Students:** 1515

Department Name & Course Number: ECON 1000/1001 A, B, C, D, V
Course Instructor(s): N. Rowe, G. Kowalski, V. Dehejia, T. Joseph, M. Francis

Authorized Memoranda
None.

Students MUST count the number of pages in this examination question paper before beginning to write, and report any discrepancy immediately to a proctor. This question paper has pages.

This examination paper MAY **be taken from the examination room.**

In addition to this question paper, students require: two (2) examination booklets yes ☒ no ☐
a Scantron sheet yes ☐ no ☒

PLEASE READ ALL INSTRUCTIONS CAREFULLY

Note: This examination has three (3) sections

PART A: MULTIPLE CHOICE (20 questions, 2 marks each). Answer ALL questions. Detach answer sheet from examination paper and hand in answer sheet with exam booklets. USE BLOCK CAPITAL LETTERS. (Total 40 Marks).

PART B: SHORTER QUESTIONS: Answer any FIVE (5) of the questions. Each question is worth 8 marks. Answer in exam booklet. (Total 40 Marks)

PART C: LONGER QUESTIONS: Answer any ONE (1) of the questions. Each question is worth 20 marks. Answer in exam booklet. (Total 20 Marks)

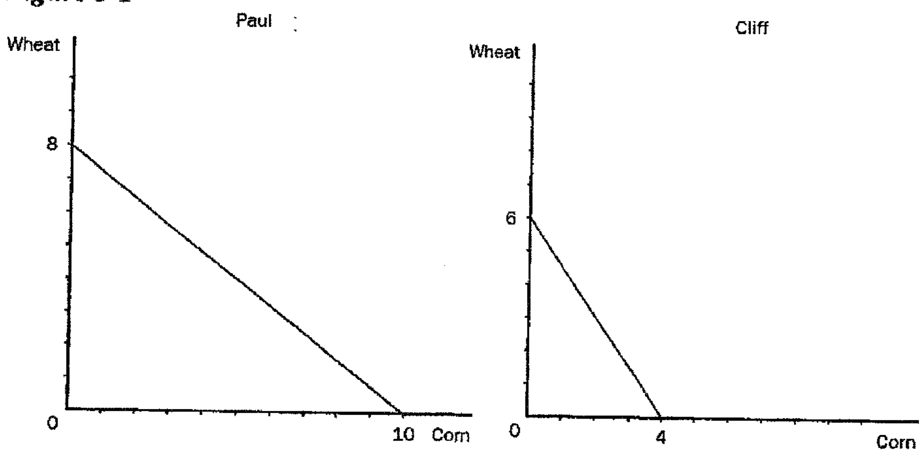
Please note: Answer Parts B & C in separate exam booklets.

Multiple Choice
Identify the choice that best completes the statement or answers the question.

1. The opportunity cost of obtaining more of one good is shown on the production possibilities frontier as the
   a. amount of the other good that must be given up.
   b. market price of the additional amount produced.
   c. amount of resources that must be devoted to its production.
   d. number of dollars that must be spent to produce it.

2. Which of the following is NOT a positive statement?
   a. Higher gasoline prices will reduce gasoline consumption.
   b. Equity is more important than efficiency.
   c. Trade restrictions lower our standard of living.
   d. If a nation wants to avoid inflation, it should not print too much money.

Figure 3-1



3. **Refer to Figure 3-1.** Which of the following is true for Cliff and Paul?
   a. Paul has a comparative advantage in both wheat and corn.
   b. Paul has a comparative advantage in wheat and Cliff has a comparative advantage in corn.
   c. Cliff has a comparative advantage in wheat and Paul has a comparative advantage in corn.
   d. Cliff has a comparative advantage in both wheat and corn.

Table 3-2

Labor Hours needed to make one unit of:			Amount produced in 160 hours:	
	Quilts	Dresses	Quilts	Dresses
Helen	40	10	4	16
Carolyn	80	16	2	10

4. **Refer to Table 3-2**. Helen and Carolyn both could benefit by Helen specializing in
   a. dresses and Carolyn specializing in quilts.
   b. neither good and Carolyn specializing in both goods.
   c. quilts and Carolyn specializing in dresses.
   d. both goods and Carolyn specializing in neither good.

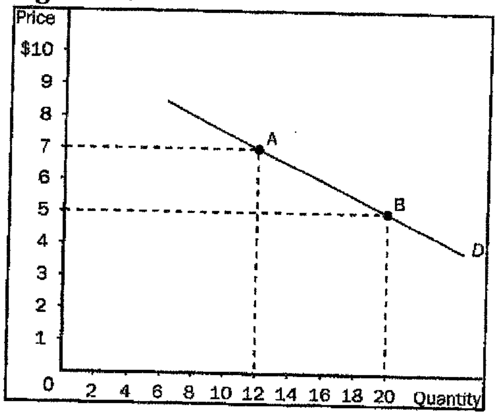
Table 3-4

	Hours needed to make one unit of:		Amount produced in 2400 hours:	
	Cars	Airplanes	Cars	Airplanes
Canada	40	160	60	15
Japan	50	150	48	16

5. **Refer to Table 3-4**. The opportunity cost of 1 car for Japan is
   a. 4 airplanes.
   b. 3 airplanes.
   c. 1/3 airplane.
   d. 1/4 airplane.

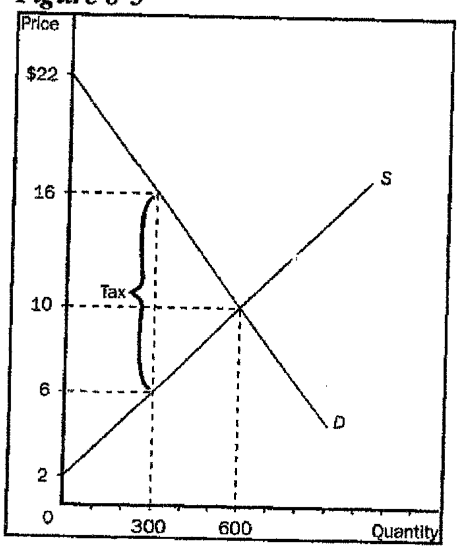
6. A decrease in resource costs to firms in a market will result in
   a. a decrease in equilibrium price and an increase in equilibrium quantity.
   b. a decrease in equilibrium price and a decrease in equilibrium quantity.
   c. an increase in equilibrium price and no change in equilibrium quantity.
   d. an increase in equilibrium price and an increase in equilibrium quantity.

Figure 5-8



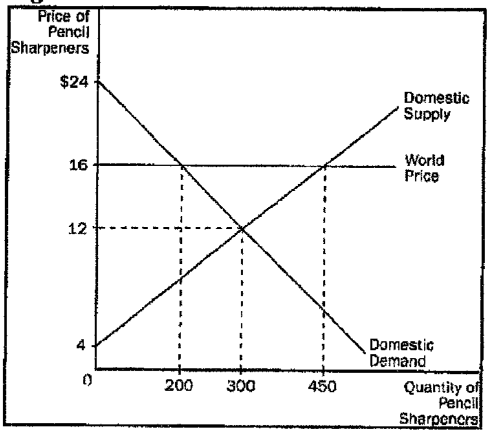
7. **Refer to Figure 5-8**. Between point A and point B we know that
   a. the slope is equal to 1/4 and elasticity is equal to 2/3.
   b. the slope is equal to 1/4 and elasticity is equal to 3/2.
   c. the slope is equal to 3/2 and elasticity is equal to 1/4.
   d. the slope is equal to 2/3 and elasticity is equal to 1/4.
   e. the slope is equal to 4 and elasticity is equal to 3/2.

Figure 8-5



8. **Refer to Figure 8-5**. If the tax is imposed on the buyer, consumer surplus would be
   a. $600.
   b. $900.
   c. $1500.
   d. $2200.
   e. $3000.

Figure 9-2



9. **Refer to Figure 9-2.** For China, at the world price,
   a. the domestic quantity demanded is greater than the domestic quantity supplied.
   b. the domestic quantity demanded is less than the domestic quantity supplied.
   c. the domestic quantity demanded equals the domestic quantity supplied.
   d. this country should raise the domestic price of baskets.

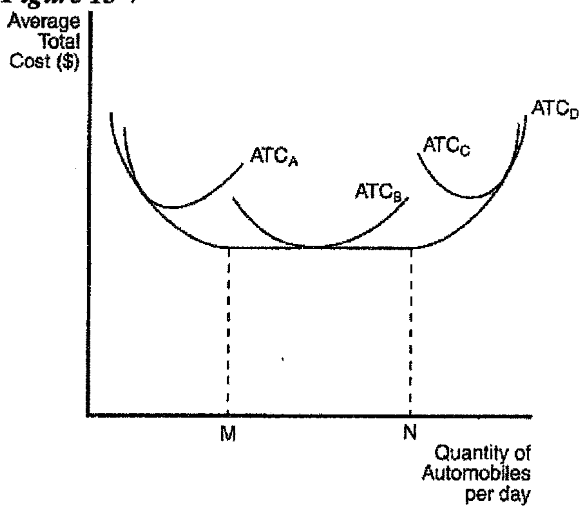
10. The Coase theorem suggests that private markets may not be able to solve the problem of externalities
   a. when the number of interested parties is large and bargaining costs are high.
   b. if government does not actively become involved in the process.
   c. if the firm in the market is a monopoly.
   d. if some people benefit from the externality.

11. Goods that are not rival include both
   a. natural monopolies and public goods.
   b. public goods and common resources.
   c. common resources and private goods.
   d. private goods and natural monopolies.

12. Some goods can be either common resources or public goods depending on
   a. whether the good is rival.
   b. how policymakers deal with the good.
   c. the marginal cost of the good.
   d. whether the good is excludable.
   e. None of the above are correct.

The figure below depicts average total cost functions for a firm that produces automobiles. Use the figure to answer the following questions.

Figure 13-7



13. **Refer to Figure 13-7.** This firm experiences diseconomies of scale at what output levels?
    a. output levels above N
    b. output levels between M and N
    c. output levels below M
    d. All of the above are correct, if the firm is operating in the long run.

14. For a firm in a perfectly competitive market, the price of the good is always
    a. equal to marginal revenue.
    b. equal to total revenue.
    c. greater than average revenue.
    d. equal to average revenue.
    e. Both a and d are correct.

Scenario 14-2
Assume a certain firm is producing 1,000 units of output (so Q = 1,000). At Q = 1,000, the firm's marginal cost equals $15 and its average total cost equals $11. The firm sells its output for $12 per unit.

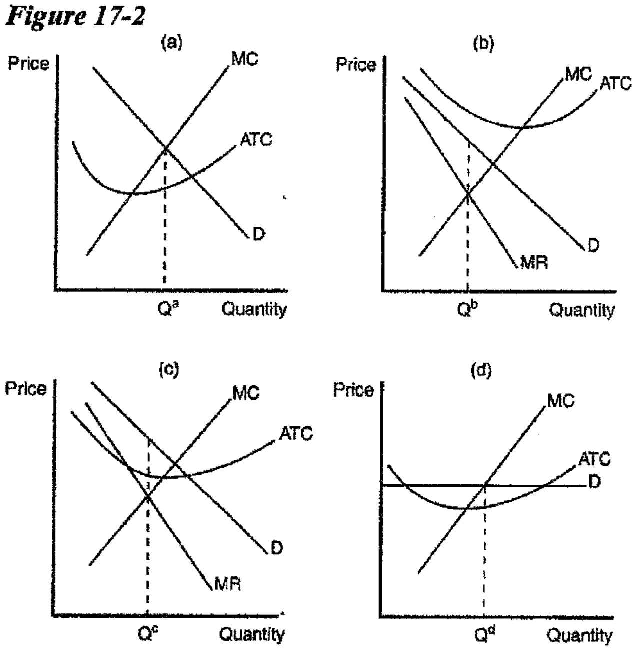
15. **Refer to Scenario 14-2.** At Q = 999, the firm's total cost amounts to
    a. $10,985.
    b. $10,990.
    c. $10,995.
    d. $10,999.
    e. $11,000.

16. If a profit-maximizing monopolist faces a downward-sloping market demand curve, its
    a. average revenue is less than the price of the product.
    b. average revenue equals the price of the product.
    c. average revenue is less than marginal revenue.
    d. marginal revenue is greater than the price of the product.
    e. marginal revenue is less than the price of the product.

17. As a group, oligopolists would always be best off if they would
    a. produce the perfectly competitive quantity of output.
    b. produce more than the perfectly competitive quantity of output.
    c. charge the same price that a monopolist would charge if the market were a monopoly.
    d. operate according to their own individual self-interests.

18. A situation in which economic actors interacting with one another each choose their best strategy given the strategies the others have chosen is called
    a. a competitive equilibrium.
    b. an open market solution.
    c. a socially optimal solution.
    d. a Nash equilibrium.

Figure 17-2



19. **Refer to Figure 17-2.** Which of the graphs shown would be consistent with a firm in a monopolistically competitive market that is earning a positive profit?
    a. panel a
    b. panel b
    c. panel c
    d. panel d

20. What is the present value of a payment of $200 to be made one year from today if the interest rate is 10 percent?
    a. $180
    b. $181.82
    c. $220
    d. $222.22

Part B: ***Short Answer Questions***
Answer 5 out of 9. (8 marks each)

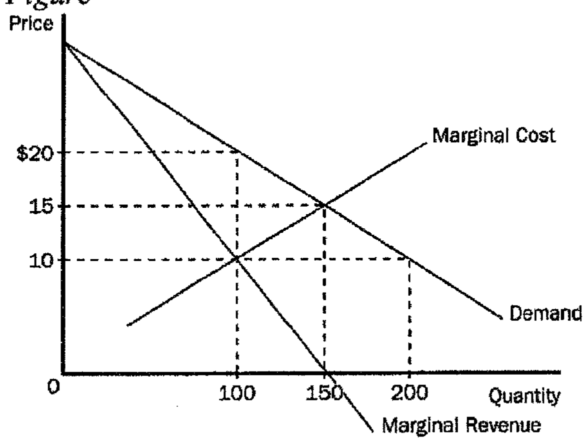
1. Beachfront resorts have an inelastic supply, and automobiles have an elastic supply. Suppose that a rise in population doubles the demand for both products (that is, the quantity demanded at each price is twice what it was).
(a) What happens to the equilibrium price and quantity in each market?
(b) Which product experiences a greater change in price?
(c) Which product experiences a greater change in quantity?
(d) What happens to total consumer spending on each product?
Illustrate your answers using supply and demand diagrams for each product.

2. a) Describe what is meant by an "externality"?
b) Using a supply and demand diagram, demonstrate how a negative externality leads to market inefficiency. Illustrate how the market equilibrium with the negative externality compares with the social optimum.
c) How might the government help to eliminate this inefficiency?

3. The world price of aluminum is below the no-trade price (domestic price without trade) in the United Kingdom. Using a supply-and-demand diagram and welfare analysis (consumer and producer surplus), show what are the gains from trade, and also who gains and who loses.

4. Refer to the diagram below to answer the following questions.

Figure



a) To maximize total surplus, a benevolent social planner would choose what price and how many units? Explain your answer.
b) To maximize its profit, a monopolist would choose what price and how many units? Explain your answer.
c) What is the deadweight loss caused by the profit-maximizing monopoly (how many dollars)? Graphically depict the deadweight loss.

5. Use a graph to demonstrate why a profit-maximizing monopolistically competitive firm must operate at excess capacity (below the level of output at which average total cost is at a minimum). Explain why a perfectly competitive firm is not subject to the same constraint.

6. One example of price discrimination occurs in the publishing industry when a publisher initially releases an expensive hardcover edition of a popular novel, and later releases a cheaper paperback edition. Use this example to demonstrate the benefits and potential pitfalls of a price discrimination pricing strategy.

7. Think about the market for gasoline. Use demand and supply analysis to answer the following:
   a) Explain what will happen to the market for gasoline if there is an increase in demand.
   b) Suppose that the government responds to the increase in demand by fixing the gas price at its original level, what happens?
   c) If the market price cannot adjust to ration the increase in demand, how might the extra demand get rationed?

8. A bond pays $10 in 2011, $10 in 2012, and $110 in 2013.
   a) Write down the formula for the Present Value of this bond in 2010.
   b) If the interest rate fell from 10% to 5%, would the market price of this bond rise or fall? Explain.

9. Two problems in insurance markets are moral hazard and adverse selection.
   a) Explain what is meant by "moral hazard", and give an example.
   b) Explain what is meant by "adverse selection", and give an example.

Next Section...

FNK

Part C ***Long Question***
Answer 1 out of 3 (20 marks)

1. This question on unit commodity taxes is divided into three parts.

   a) Compare a market with elastic supply and demand curves to a market with inelastic supply and demand curves. In which market will a tax cause the bigger deadweight loss? Explain.

   b) How does elasticity affect the burden of a tax? (The incidence of the tax on consumers and producers)? Justify your answer using supply and demand diagrams.

   c) Illustrate on three demand and supply graphs how the size of a tax (small, medium and large) can alter total government revenue and deadweight loss. Explain what happens to total government revenue as the tax is increased.

2. The market in cotton cloth of a standard grade is perfectly competitive. Assume that the discovery of a new synthetic fibre, which is a good substitute for cotton, shifts the demand curve for cotton cloth downwards. Show the short and long run effects on price, output and profits of individual firms in the cotton cloth industry and on the number of firms in the industry. Use diagrams to illustrate.

3. Canada imports shoes. Using a carefully labelled diagram explain the effects of a tariff on imported shoes:

   a) The price of shoes in Canada and the quantity of imports.
   b) Consumer surplus, producer surplus and tax revenue.
   c) Would it be a valid argument to say that the tariff would increase employment in Canada and make Canadians better off? Explain.

PART A. **MULTIPLE CHOICE ANSWER SHEET**

NAME____
[SURNAME, GIVEN NAME]
STUDENT NUMBER____________________________________

USE **UPPER CASE LETTERS** TO ANSWER.

1. ________
2. ________
3. ________
4. ________
5. ________
6. ________
7. ________
8. ________
9. ________
10. ________
11. ________
12. ________
13. ________
14. ________
15. ________
16. ________
17. ________
18. ________
19. ________
20. ________