UNIVERSITY OF TORONTO
Faculty of Arts and Science

APRIL EXAMINATIONS 2013

ECO 100Y1 Y

Duration: 3 hours

Examination Aids allowed: Non-programmable calculators only

INSTRUCTIONS:

- Students are required to do Part I and <u>ONE</u> of Parts II, III, IV, or V.
- Part I is the multiple choice section and is worth 50% of the exam mark. Record all your answers for Part I on the SCANTRON sheet provided <u>and</u> on the first page of your first examination booklet (Note: in case of any disagreement, the answer to be marked is the one on the SCANTRON sheet).
- To fill out the SCANTRON sheet, please use an HB or "soft" pencil only. There is no penalty for incorrect answers in the multiple choice section so be sure to provide an answer for every question.
- Answers for the other Part of your exam will be written in examination booklets.

PART I   To be answered by all students.

PART II   To be answered <u>ONLY</u> by students from **Professors Pesando and Stockley**'s section (L0101)

PART III   To be answered <u>ONLY</u> by students from **Professor Indart**'s section (L0201)

PART IV   To be answered <u>ONLY</u> by students from **Professor Gazzale**'s section (L0301)

PART V   To be answered <u>ONLY</u> by students from **Professor Wolfson**'s section (L5101)

PART I [50%]
MULTIPLE CHOICE QUESTIONS
(To be answered by all students)

INSTRUCTIONS:

- Multiple choice questions are to be answered using **an HB or "soft" pencil only** on the separate **SCANTRON sheet** being supplied.

- **Be sure to fill in your name and student number on the SCANTRON sheet.** And write the **name of your instructor** on the **SCANTRON sheet** as well.

- Each question is worth 1 mark. **No deductions will be made for incorrect answers.**

- **Write your answers to the multiple choice questions ALSO on the first page of the first examination booklet used for short answer questions.** You may use this question booklet for rough work, **and then transfer your answers to each multiple choice question onto the separate SCANTRON sheet.** Your answers **must be** on the SCANTRON sheet. In case of a disagreement, **the answer to be marked is the one on the SCANTRON sheet.**

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1. Suppose that the market demand and supply curves for ice cream have the usual slopes. A fall in the price of raw milk, used in the production of ice cream, will
   a) cause a downward movement along the supply curve of ice cream.
   b) cause an upward movement along the supply curve of ice cream.
   c) cause the supply curve of ice cream to shift up to the left.
   d) cause the supply curve of ice cream to shift down to the right.
   e) have no effect on the supply curve of ice cream.

2. Suppose that the market demand and supply curves for good "A" have the usual slopes. Which one of the following events would cause the demand for good "A" to increase?
   a) The price of a substitute product decreased.
   b) Disposable income increased and good "A" is an inferior good.
   c) The price of a complementary good increased.
   d) Disposable income decreased and good "A" is a normal good.
   e) None of the above would cause the demand for good "A" to increase.

3. Suppose that the market demand and supply curves for good "A" have the usual slopes, where good "A" is a normal good. Suppose that the incomes of buyers of good "A" decline and that there is a reduction in the price of an input used in the production of good "A". What would you expect to occur in this market?
   a) Equilibrium price would increase, but the impact on the equilibrium quantity cannot be determined.
   b) Equilibrium price would decrease, but the impact on the equilibrium quantity cannot be determined.
   c) Both equilibrium price and equilibrium quantity would decrease.
   d) Equilibrium quantity would increase, but the impact on the equilibrium price cannot be determined.

e) Equilibrium price would decrease while equilibrium quantity would increase.

4. Suppose that the market demand and supply curves for tuna fish have the usual slopes. The government now reduces income taxes such that disposable incomes increase. As a result, the price of tuna fish falls. We can therefore conclude that
    a) tuna fish is a normal good.
    b) the demand curve for tuna fish is elastic.
    c) the demand curve for tuna fish is inelastic.
    d) tuna fish is a substitute good.
    e) tuna fish is an inferior good.

5. Suppose that the market demand and supply curves for a particular good have the usual slopes. The government now decides to repeal an effective price ceiling that it had previously imposed on this good. As a result, it can be expected that
    a) the price would decrease, the quantity demanded would decrease and the quantity supplied would increase.
    b) the price would decrease, the quantity demanded would increase and the quantity supplied would decrease.
    c) the price would increase, the quantity demanded would decrease and the quantity supplied would increase.
    d) the price would increase, the quantity demanded would increase and the quantity supplied would decrease.
    e) no changes would take place.

6. Suppose that the market demand and supply curves for cheese have the usual slopes. When the price of raw milk used to produce cheese rises, the consumer surplus associated with the consumption of cheese will
    a) definitely increase.
    b) definitely decrease.
    c) decrease only if cheese is a normal good.
    d) decrease only if cheese is an inferior good.
    e) not change.

7. Suppose that the market demand and supply curves for a certain consumer good have the usual slopes. The government now gives consumers a subsidy of $2.00 per unit. As a result of this intervention, which one of the following statements is correct in the short run?
    a) Both consumer and producer surpluses will decrease.
    b) Consumer surplus will increase while producer surplus will remain unchanged.
    c) Consumer surplus will increase while producer surplus will decrease.
    d) Consumer surplus will decrease while producer surplus will increase.
    e) Both consumer and producer surpluses will increase.

8. Which one of the following statement is true for a production process that involves a positive externality?
    a) A per-unit tax could be imposed on the producer to achieve the socially optimum level of production.
    b) The marginal societal cost is greater than the marginal private cost.
    c) The marginal societal benefit is smaller than the marginal private benefit.
    d) A subsidy to producers could increase production to the socially optimum level.
    e) Without government intervention the market will produce too much of this good.

9. In a competitive market, consumer surplus exists because
    a) some sellers are willing to sell for a lower price than the equilibrium price.
    b) some consumers are willing to pay more than the equilibrium price.
    c) sellers will only sell at prices above the actual price.
    d) consumers are willing to make purchases only if the price is below the actual price.
    e) all consumers are willing to make purchases only at equilibrium price.

10. The marginal private benefit (MB_P) and marginal private cost (MC_P) curves for good X are given by the expressions $MB_P = 120 - Q$ and $MC_P = Q$, where Q represents units of good X per week. In addition to private costs, there is a marginal external cost of $10 per unit of output. What is the efficient level of output per week?
    a) 0.
    b) 50.
    c) 55.
    d) 60.
    e) None of the above.

11. A perfectly competitive industry is in short run equilibrium and making normal profits (i.e., zero economic profits). Each firm has a total fixed cost (TFC) of $50,000 per year. Now, each firm faces an increase in property taxes of $40,000 per year. As a result of this shock, which one of the following statements is correct in the short run?
    a) Each firm would shut down.
    b) Each firm would produce an unchanged output and make economic losses of $40,000.
    c) Each firm would increase output until economic losses are zero.
    d) Each firm would produce an unchanged output and make economic losses of $10,000.
    e) None of the above is correct.

12. Suppose that in a perfectly competitive industry, the market price of the product is $5.00. Firm "A" is producing 100 units of output per week and has a weekly total fixed cost (TFC) of $100. At its current level of output, the firm's average total cost (ATC) is $6.50 and its marginal cost is $5.00. Being a profit-maximizer, firm "A" should
    a) reduce output.
    b) shut down in the short run.
    c) increase the price of the product.
    d) expand output.
    e) leave output unchanged.

13. If a perfectly competitive firm is faced with average revenue below average variable cost, in the short run it will shut down so as to reduce its
    a) costs to below its revenue.
    b) costs to zero.
    c) losses to the amount of its fixed costs.
    d) losses to the amount of its variable costs.
    e) losses to the amount of its marginal costs.

14. A perfectly-competitive ice cream vendor has the following data: market price is $4.00; output is 1000 ice cream cones per week; average total cost (ATC) is $4.50; marginal cost (MC) is $4.00; and average variable cost (AVC) is $3.50. Under these circumstances, the firm will
    a) continue to operate because it is producing where P = MC.
    b) shut down in the short run since it is making economic losses of $500 per week.
    c) shut down in the short run since the price is less than the average total cost.
    d) continue to operate since economic losses would increase to $1000 per week if it were to shut down in the short run.
    e) continue to operate because average fixed costs (AFC) are being covered.

15. Which one of the following statements is correct for a firm in a perfectly competitive industry where all firms have the same costs?
    a) In the short run, the firm will produce a positive output if average revenue is less than average variable costs.
    b) In the short run, the firm will make economic profits if average revenue equals average fixed costs.
    c) In the long run, the firm will make normal profits (i.e., zero economic profits) if the industry price equals marginal cost.
    d) In the long run, the firm will produce a positive output even if average revenue is less than average total cost.
    e) None of the preceding statements is correct.

16. Corn is produced by varying amounts of labour on a farm with land as a fixed input (there are only two inputs). Under these conditions, which one of the following statements is correct?
    a) When marginal product is at a maximum, marginal product equals average product.
    b) When marginal product is falling (but has a positive value), total product is decreasing.
    c) Diminishing marginal returns occur when an additional unit of labour increases total product by less than the previous unit of labour did.
    d) The marginal product is derived by dividing total product by the units of the variable factor (labour).
    e) Both b) and c).

17. In the short run production period, which one of the following statements is correct?
    a) The average fixed cost curve is U-shaped.
    b) Marginal cost is the extra variable cost associated with an extra unit of the fixed factor.
    c) If a firm's total cost increases as its output increases, then marginal cost must be increasing.
    d) At any output level for the firm, the vertical distance between the average variable cost curve and the average total cost curve represents the value of average fixed costs.
    e) Both c) and d).

18. A firm produces output with two inputs, one of which is fixed in the short run. Input prices are constant. The firm's short run marginal cost curve is increasing when:
    a) average fixed cost is increasing.
    b) marginal product is decreasing.
    c) marginal product is increasing.
    d) only when average total cost is increasing.
    e) none of the above.

19. In the short run production period, with labour as the only variable input, which one of the following statements is correct?
    a) With fixed input prices, when average product per worker is at a maximum, average variable cost is at a minimum.
    b) When the marginal cost curve is increasing, then the average variable cost curve must also be increasing.
    c) When there is an increase in fixed costs, there will also be an increase in marginal costs.
    d) The minimum point of the average total cost curve will occur at a lower output than the minimum point of the average variable cost curve.
    e) None of the above.

20. A firm produces output with two inputs, one of which is fixed in the short run. Input prices are constant. If the firm faces the "law of diminishing (marginal and average) returns", we can conclude that the firm has:
    a) a positively-sloped short run supply curve (for positive output).
    b) a negatively-sloped demand curve.
    c) profits greater than zero in the short run.
    d) a perfectly elastic demand curve.
    e) none of the above.

21. A driver wishes to buy gasoline and have her oil checked too. The price of gasoline at the pump is $2.00 per litre. The pricing for the oil check varies: it is $1.00 when she buys 49 litres, but falls to $0.75 if she buys 50 litres. The marginal cost of the 50th litre of gasoline is effectively:
    a) $2.00.
    b) $2.75.
    c) $2.25.
    d) $1.75.
    e) none of the above.

22. A country produces only food and clothing, using capital and labour. It has a linear production-possibilities frontier (PPF) [also called production-possibilities curve (PPC)]. Which one of the following statements is accurate?
    a) A point inside the PPF is an attainable point, but would indicate an inefficient use of available resources.
    b) An increase in inputs available over time will cause the initial PPF to shift outward.
    c) When movements are considered along a single PPF, successive unit increases in clothing will result in the same opportunity cost of clothing in terms of food.
    d) Only a) and b) are correct.
    e) All of a), b) and c) are correct.

23. Suppose there are only three things you can do rather than go to a rock concert, using a $200 ticket you won in a random draw: 1) work for the evening, earning $100; 2) watch a hockey game at home on TV, which you value at $150; or 3) go out to play pool with your friends, which you value at $75. The opportunity cost of the concert you attended is
    a) $100, because this is the money you could have earned at work, and work is the only alternative generating cash.
    b) $150, because this is the highest valued alternative sacrificed to go to the concert.
    c) $200, because you clearly valued the concert the most, since you attended it.
    d) $75, because this is the lowest valued alternative sacrificed to go to the concert.

e) $0, because you clearly valued the concert the most, since you attended it.

24. Which of the following is true if marginal cost is above average variable cost, as output rises?
    a) Average total cost must be rising.
    b) Average fixed cost must be rising.
    c) Average variable cost must be rising.
    d) Average variable cost must be falling.
    e) Both a) and c).

The following data are used for questions 25 and 26 about trade between "Home" country and "Foreign" country. Labour is the only input; transportation costs are zero. Both countries operate along their Production Possibility Frontiers [Curves].

Production Possibilities
Output Per 100 Units of Labour Input

	Home	Foreign
Wheat	100	200
Cloth	250	150

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25. In the Home Country, the opportunity cost of producing each unit of Wheat is:
    a) zero.
    b) 250 units of Cloth.
    c) 25 units of Cloth.
    d) 2.5 units of Cloth.
    e) 0.75 units of Cloth.

26. Assume, prior to trade, that both countries are producing both goods. Which of the following changes in production would accompany mutually beneficial trade between Home and Foreign?
    a) Wheat production would increase in Home.
    b) Wheat production would decrease in Home.
    c) There would be no change in wheat production in Home.
    d) Wheat production would decrease in Foreign.
    e) The answer depends on the terms of trade, which are not provided.

27. Consider the imposition of an excise tax on a good which has a negatively-sloped demand and a positively-sloped supply. In which one of the following situations do producers bear the greatest incidence (burden) of the tax?
    a) The demand is elastic and the supply is elastic.
    b) The demand is inelastic and the supply is inelastic.
    c) The demand is inelastic and the supply is elastic.
    d) The demand is elastic and the supply is inelastic.
    e) The demand is unit elastic and the supply is unit elastic.

The following data are used for questions 28 and 29 about trade between Upper and Lower. Labour is the only input; transportation costs are zero. Both countries operate along their Production Possibility Frontiers [Curves].

Production Possibilities
Output Per 1 Unit of Labour Input

	Upper	Lower
Timber	4	3
Wine	5	2

28. If Upper decreases output of the good it is going to import from Lower by 60 units, and if Lower increases output of that good by 60 units, what will happen to the "world" output of the other good (i.e., the total produced by both countries)?
    a) It will increase by 15.
    b) It will decrease by 15.
    c) It will increase by 35.
    d) It will decrease by 35.
    e) None of the above.

29. From Upper's perspective, if trade is to occur, the (minimum) terms of trade must be such that 1 unit of Wine will exchange for:
    a) less than 0.8 units of Timber.
    b) less than 1.25 units of Timber.
    c) more than 1.25 units of Timber.
    d) more than 0.8 units of Timber.
    e) no terms of trade are possible, since opportunity costs are the same.

30. If the incidence (burden) of an excise tax falls entirely on consumers, we can conclude that:
    a) the supply curve is perfectly elastic.
    b) the demand curve is perfectly elastic.
    c) the demand curve is more elastic than the supply curve at the original price.
    d) the supply curve is inelastic and the demand curve is elastic.
    e) none of the above.

31. Consider the linear demand schedule $P = 10 - 1Q_D$. The price elasticity of demand along this demand curve:
    a) has a value of 1.
    b) is constant, but not at a value of 1.
    c) decreases as quantity increases.
    d) increases as quantity increases.
    e) none of the above.

32. A straight line (linear) demand curve has:
   a) constant price elasticity of demand and a varying slope.
   b) a varying slope and a varying price elasticity of demand.
   c) a constant slope and a varying price elasticity of demand.
   d) a constant slope and a constant price elasticity of demand.
   e) none of the above.

33. If at a price of $20, quantity bought is 5400 units and at $30, quantity bought is 4600 units, then the (arc) price elasticity of demand is approximately:
   a) 0.3.
   b) 0.4.
   c) 0.5.
   d) 1.0.
   e) none of the above.

34. If a lowering of the price along a given demand schedule (curve) leads to lower total expenditures by the consumer, the price elasticity of the demand between the two points is
   a) greater than 1, but not infinity (i.e., not perfectly elastic).
   b) equal to 1.
   c) infinity (i.e., perfectly elastic).
   d) less than 1.
   e) indeterminate from the information provided.

35. If a 5% increase in price results in a 5% reduction in total revenue, the price elasticity of demand is approximately:
   a) 5.
   b) 2.
   c) 1.
   d) 0.5.
   e) 0.2.

36. A single-price monopolist facing a linear, downward sloping demand curve is currently maximizing profits. What would be the effect of forcing the monopolist to slightly lower its price?
   a) Total revenue would decrease while total surplus might increase or decrease.
   b) Total revenue would decrease while total surplus would increase.
   c) Total revenue might increase or decrease while total surplus would increase.
   d) Both total revenue and total surplus might increase or decrease.
   e) Both total revenue and total surplus would increase.

37. Suppose the smartphone market is perfectly competitive. What would be the result of the formation of a successful smartphone cartel?
   a) The quantity of smartphones sold would increase.
   b) The increase in producer surplus would be larger than the decrease in consumer surplus.
   c) Total surplus might increase or decrease.
   d) Total surplus would decrease.
   e) None of the above.

38. With both expecting 5% inflation, Haruki lent Ha $100 for 1 year at a nominal interest rate of 10%. During that time, the consumer price index (CPI) increased from 200 to 208.
    a) Both Haruki and Ha are worse off because inflation was higher than expected.
    b) Haruki (the lender) is worse off because inflation was higher than expected.
    c) Ha (the borrower) is worse off because inflation was higher than expected.
    d) Haruki (the lender) is worse off because inflation was lower than expected.
    e) Ha (the borrower) is worse off because inflation was lower than expected.

39. In December 2012, Future Shop imported an iPad for $400. In January 2013, Future Shop sold this iPad for $600. As a result of these transactions,
    a) Canadian GDP increased by $400 in 2012 and by $600 in 2013.
    b) Canadian GDP increased by $400 in 2012 and by $200 in 2013.
    c) Canadian GDP increased by $0 in 2012 and by $600 in 2013.
    d) Investment increased by $600 in 2012.
    e) Investment decreased by $400 in 2013.

40. In December 2012, Future Shop imported an iPad for $400. In January 2013, Future Shop sold this iPad for $600. The Canadian value added as a result of these transactions is
    a) $400 in 2012 and $600 in 2013.
    b) $0 in 2012 and $600 in 2013.
    c) $0 in 2012 and $200 in 2013.
    d) $600 in 2012 and $0 in 2013.
    e) $200 in 2012 and $0 in 2013.

41. A firm's revenues were $1 million for the year. It paid $200,000 to suppliers for raw materials, $300,000 in wages, $100,000 in interest payments, and accurately reported a profit of $150,000. Which of the following can be true?
    a) This firm's contribution to GDP was $750,000.
    b) This firm might have paid $175,000 in indirect taxes and seen its equipment depreciate by $75,000.
    c) This firm might have paid $300,000 in indirect taxes and seen its equipment depreciate by $50,000.
    d) This firm might have paid $250,000 in indirect taxes and seen its equipment depreciate by $50,000.
    e) This firm might have paid $50,000 in indirect taxes and seen its equipment depreciate by $250,000.

42. Consider the following government expenditures: $15 for unemployment claims; $20 paid to retirees for pensions; $30 in interest payments on government debt of $600, and $50 to build a bridge which a private contractor would have built for $40. What is the government's contribution to GDP?
    a) $40.
    b) $50.
    c) $55.
    d) $65.
    e) None of the above.

43. Consider the following economy: marginal propensity to consume equals 3/4, the tax rate equals 1/5, and the marginal propensity to import equals 1/5. What is the short-run expenditure multiplier assuming no change in prices?
    a) 1/5 (or .2).
    b) 3/5 (or .6).
    c) 5/3 (or approximately 1.67).
    d) 4.
    e) 5.

44. Which of the following is consistent with an increase in a country's marginal propensity to save?
    a) A parallel shift up of the aggregate expenditure function.
    b) A parallel shift down of the aggregate expenditure function.
    c) An increase in the slope of the aggregate expenditure function.
    d) A decrease in the slope of the aggregate expenditure function.
    e) Both (a) and (c) are consistent.

45. The recent financial crisis caused relatively large decreases in the real GDPs of many of China's export markets. Which of the following are consistent with the effects on China's economy?
    a) A downward shift of the aggregate expenditure (AE) curve and an inward shift of the aggregate demand (AD) curve.
    b) A downward shift of the AE curve and a movement up the AD curve.
    c) A downward shift of the AE curve and an inward shift of the short-run aggregate supply (AS) curve.
    d) An upward shift of the AE curve and a movement up the AD curve.
    e) An upward shift of the AE curve and a movement up the AD curve.

46. Which of the following will lead to an inward shift of the money demand curve [the liquidity preference curve]?
    a) An increase in real interest rates.
    b) The Bank of Canada buying government securities.
    c) A decrease in real GDP.
    d) An increase in the price level.
    e) Both (a) and (d).

47. In the foreign exchange market, which of the following is consistent with higher inflation in Canada than in the U.S.?
    a) A decreased supply of U.S. dollars and an increased demand for U.S. dollars, resulting in a depreciation of the Canadian dollar.
    b) An increased supply of U.S. dollars and a decreased demand for U.S. dollars, resulting in an appreciation of the Canadian dollar.
    c) An increased supply of U.S. dollars and an increased demand for U.S. dollars, but the change in the exchange rate cannot be determined.
    d) A decreased supply of U.S. dollars and an increased demand for U.S. dollars, resulting in an appreciation of the Canadian dollar.
    e) An increased supply of U.S. dollars and a decreased demand for U.S. dollars, resulting in a depreciation of the Canadian dollar.

48. An economy starts at equilibrium with autonomous aggregate expenditures equal to $\acute{AE}_0$. An autonomous increase in exports increases autonomous aggregate expenditures to $\acute{AE}_1$

before prices adjust, and to $\acute{A}E_2$ after the price level changes. Which of the following is correct?

a) $\acute{A}E_2$ will be less than $\acute{A}E_0$.

b) $\acute{A}E_2$ will equal $\acute{A}E_0$.

c) $\acute{A}E_2$ will equal $\acute{A}E_1$.

d) $\acute{A}E_2$ will be higher than $\acute{A}E_0$, but lower than $\acute{A}E_1$.

e) $\acute{A}E_2$ will be higher than both $\acute{A}E_0$ and $\acute{A}E_1$.

49. Assume the Chinese government fixed the exchange rate at 6 yuans per 1 U.S. dollar. Assume further that if the exchange rate were not fixed, the exchange rate would be 3 yuans per 1 U.S. dollar.

a) To maintain this exchange rate, the central bank of China must sell U.S. dollars.

b) Maintaining the exchange rate is causing the central bank of China to increase its reserves of U.S. dollars.

c) U.S exporters benefit from this fixed exchange rate.

d) Both (a) and (c) are true.

e) Both (b) and (c) are true.

50. Which of the following is consistent with a large purchase of government securities by the Bank of Canada:

a) An appreciation of the Canadian dollar resulting in an increase in net exports.

b) An appreciation of the Canadian dollar resulting in a decrease in net exports.

c) A depreciation of the Canadian dollar resulting in an increase in net exports.

d) A depreciation of the Canadian dollar resulting in a decrease in net exports.

e) The effect on the Canadian dollar is uncertain.

PART II   [50%]

PART II   To be answered ONLY by students from Professors Pesando and Stockley's section (L0101)

Answer <u>All</u> questions.

Question 1: 4 points

On December 31, 2011 you purchase a broken machine for $500 knowing that you can sell it for $1000 after it is repaired. You expect that repairs can be made with domestically produced inputs for $200.

(a) **(2 points)** If you repair and sell the machine within 6 months, how will <u>the machine</u> impact the GDP for Canada in 2012?

(b) **(2 points)** You discover that you <u>must</u> import the repair inputs and the actual cost of the repair is $750. If you cannot resell the machine unless you fix it, should you pay for the repairs? Why or why not?

Question 2: 9 points

The market for onions is perfectly competitive and is in long run equilibrium. Each firm has constant marginal cost of $3 and no fixed costs. Demand has the usual shape.

(a) **(3 points)** In an appropriate (half page) diagram, show the equilibrium in the <u>market</u>. *Be sure to clearly label all necessary curves and axes.*

(b) **(3 points)** Eating onions creates such bad breath that people are willing to pay $1 per onion to prevent their neighbours from consuming these onions. Is the market equilibrium calculated in (a) allocatively efficient? Why or why not? Label the allocatively efficient <u>market quantity</u> on the diagram above.

(c) **(3 points)** The government gives a subsidy worth $1 per onion to each consumer. Label the new <u>market quantity</u> of onions on the diagram for the market above. Was this the correct government intervention? Why or why not?

Question 3: 8 points

An author sells the <u>exclusive</u> right to print her book to a publisher who has the usual shaped cost curves and faces the usual shaped demand.

(a) **(3 points)** Illustrate the market price P_P and Quantity Q_P in a (half page) diagram. *Be sure to clearly label all necessary curves and axes.*

(b) **(2 points)** The publisher pays the author 10% of the revenues from her book sales, so the author wants to maximize total revenue. On the same diagram, label the Price P_A and Quantity Q_A that the author deems optimal.

(c) **(3 points)** Alternatively, the author could sell the right to print her book to many publishers, forcing them to compete for book sales. On the same diagram, label the resulting price Pc and quantity of books Qc. *Are Q_C and Q_A the same? Why or why not?*

Question 4: 13 points

The Bank of Canada buys $2 million dollars worth of government securities.

> *Label all initial curves and point of interest with the subscript "0"*
> *Label all final curves and point of interest with the subscript "1"*
> *Use arrows to indicate the direction of change*

(a) **(3 points)** In an appropriate (half page) diagram, illustrate the monetary equilibria before and after the Bank of Canada's action. *Be sure to clearly label all necessary curves and axes.*

(b) **(2 points)** Holding prices constant, the Bank of Canada's action resulted <u>only</u> in a change in desired autonomous investment expenditure. In an appropriate (half page) diagram, illustrate the aggregate expenditure function before and after the Bank of Canada's action. *Be sure to clearly label all necessary curves and axes.*

(c) **(4 points)** The change in desired autonomous investment expenditure also resulted in a change in the aggregate demand schedule. In an appropriate (half page) diagram, illustrate the short run macroeconomic equilibrium in this economy before and after the Bank of Canada's action. On the diagram, explicitly relate the change in aggregate demand to the change in aggregate expenditure in (b). *Be sure to clearly label all necessary curves and axes.*

(d) **(4 points)** Suppose the initial short run GDP was equal to potential GDP and thus the Bank of Canada's action caused an output gap. Compared to the new short run equilibrium, explain what will happen in the long run to the following variables due to the self-correction mechanism:

- i. the wage rate
- ii. real GDP
- iii. full employment GDP
- iv. the price level

<u>Question 5: 16 points</u>

All marks awarded for your <u>concise</u> explanation.

(a) **(2 points)** The invention of the computer resulted in a temporary mismatch between the skills of the labour force and the structure of labour demand. <u>True, False, Uncertain:</u> This results in natural unemployment.

(b) **(2 points)** <u>True, False, Uncertain</u>: Cable television is a public good because it is non-rival and non-excludable.

(c) **(2 points)** During a recession, a politician announces that the <u>only</u> way to eliminate unemployment without lowering the wage level is through expansionary fiscal policy. <u>True, False or Uncertain</u>: This politician's statement correct.

(d) **(2 points)** The supply of technical engineers, hired by a firm that produces widgets, is perfectly inelastic. There is an increase in the price of gizmos, a substitute for widgets. <u>True, False or Uncertain</u>: As a result, the employment and wages of technical engineers will increase.

(e) **(2 points)** <u>True, False or Uncertain</u>: Allocative efficiency is achieved with perfect price discrimination <u>because</u> the MR curve is perfectly elastic and equal to the perfectly competitive market price.

(f) **(2 points)** When anticipated inflation was 5%, John borrowed $100 from the bank at the nominal interest rate 7%. Actual inflation was 7%. <u>True, False, Uncertain</u>: John is better off than anticipated.

(g) **(2 points)** Assume all banks have the same reserve ratio. If (1) the Bank of Canada sells $1,000 worth of bonds to the public and (2) a rich individual deposits in a bank the $1,000 in cash that she kept under the bed. <u>True , False, Uncertain</u>: The money supply will not change.

(h) **(2 points)** Consider a successful cartel in the short run with the usual shaped cost and demand curves. <u>True, False, Uncertain</u>: A small decrease in price will result in an increase in total revenues for the cartel.

PART III   [50%]

PART III   To be answered ONLY by students from Professor Indart's section
(L0201)

There are two sections to this part of the exam: Section A and Section B. Use
separate booklet(s) to answer the questions from each section. You must answer
<u>all</u> questions in each of the sections.

<u>Section A: Short-Answer Questions</u>   [30%]

Answer all 10 questions. Each question is worth 3 marks. Analyze the situation
in each question, using a well-labelled diagram when relevant and provide a
brief explanation.

A1.   An unregulated, single-price monopolist is in short run equilibrium and making economic
profits. Disposable incomes decrease. The product has positive income elasticity. Use a
<u>neat</u> diagram to show the full impact of this shock on the short run monopolist's
equilibrium. <u>Briefly explain</u>.

A2.   A firm in the short run production period generates the following information at its current
level of output: the industry price is $15; the marginal revenue is $9; the average total cost
is $18; the marginal cost is $9 and average fixed cost is $5.

Statement: "This information suggests that this firm is not in perfect competition. It also
indicates that the firm is making economic losses and that it should shut down in the short
run."

Position: Do you agree with the statement? Draw a <u>neat</u> diagram to help you <u>explain</u>
your answer.

A3.   A perfectly competitive industry is in long-run equilibrium. This industry has an
<u>increasing</u> cost long-run supply curve and a negative-sloped demand curve. The
government introduces a permanent tax of $2.00 per unit of output to be paid by all
producers in this industry.

Statement: "As a result of this unit-tax, in the long run the industry price will increase
by $2.00; industry output will decrease; and the full incidence of the tax will be imposed
upon the producers."

Position: Do you agree with the statement? Draw a <u>neat</u> diagram to help you <u>explain</u>
your answer.

A4.   Laura consumes only books [x-axis product] and CDs [y-axis product]. Laura receives an
increase in her commission income. In order to maximize her level of consumer
satisfaction, Laura chooses to purchase fewer units of books after the increase in her
commission income.

Statement: "Laura's behaviour is not consistent with consumer theory."

Position: Do you agree with the statement? Draw a <u>neat</u> diagram to help you <u>explain</u>

your answer.

A5. **Statement:** "Products with inelastic demand curves are 'good' industries for the introduction of a unit-tax since the impact on equilibrium market price and quantity will be relatively small."

Position: Do you agree with the statement? Draw the proper diagram(s) to explain your answer.

A6. Suppose that the banks' desired cash reserve ratio is 12.5% and that there are no excess cash reserves in the banking system. Suppose now that Matthew deposits $500 in cash in his chequing account at the Royal Bank of Canada. Assuming no further changes in the public's currency holdings, calculate the final changes in the reserves of the banking system and the M1 money supply. Show all the work necessary to arrive at your final answers.

A7. Assume that Spain and Argentina produce only two goods: lamb and wine, with labour as the only factor of production. In Spain, 100 units of labour can either produce 400 units of lamb or 1,000 units of wine. In Argentina, 100 units of labour can either produce 200 units of lamb or 200 units of wine.

Statement: "This information indicates that Argentina is more efficient than Spain in the production of both lamb and wine, and thus Argentina has nothing to gain by engaging in trade with Spain."

Position: Do you agree with this statement? Explain your answer.

A8. Suppose that Canada imports 1,000 major computers from Japan for $10,000 Canadian each. Six hundred of these computers are sold to consumers in Canada for $14,000 each; one hundred computers are exported to Europe for $12,000 each and the remaining three hundred computers are held in inventory at their imported price. All the above figures are in Canadian dollars.

Using the expenditure approach to measure GDP, estimate the specific changes in each component of GDP (e.g., consumption, investment, etc.) resulting from the above transactions. What is the total change in GDP as a result of these transactions? Show all the work necessary to arrive at your answers.

A9. Assume that a country has too high a level of unemployment with price stability and very low rates of interest.

Statement: "Al-Karim believes that monetary policy, working through the transmission mechanism, will not bring this economy to full employment."

Position: Do you agree with this statement? Draw the proper diagram(s) to explain your answer.

A10. Using the AD and SRAS model, show what will happen to the level of prices and to the level of real GDP under each of the following independent shocks. Initially assume that the economy is not at full employment but price stability exists. Draw the proper diagram to explain your answer.

    i)   the central bank implements contractionary monetary policy;

    ii) energy costs increase;

iii) labour productivity increases.

Section B: Long-Answer Questions   [20%]

Answer both questions. Each question is worth 10 marks.

B1. Consider the following information about a hypothetical economy:

Consumption expenditure	$C = 20 + 0.8\ YD$
Government purchases	$G = 100$
Investment	$I = 60$
Exports	$X = 60$
Imports	$IM = 0.1\ Y$
Taxes	$TA = 40 + 0.25\ Y$
Government transfer payments	$TR = 80$
Full-employment output	$Y_{fe} = 574$

a) What is the level of equilibrium income in this economy? What is the value of the expenditure multiplier? **(2 mark)**

b) In this equilibrium, what are the levels of private savings (S) and of the government budget surplus (BS)? **(2 marks)**

c) The government is now considering either increasing its purchases of goods and services (G) or decreasing autonomous taxes in order to achieve full employment in the economy.

   i.   By how much should G increase to achieve full employment? What will be the government budget surplus at the new equilibrium? **(2 marks)**

   ii. By how much must autonomous taxes decrease to achieve full employment? What will be the government budget surplus at the new equilibrium? **(2 marks)**

d) Suppose now that the government decides to achieve full employment by increasing G while simultaneously increasing autonomous taxes by the same amount. By how much should increase G and autonomous taxes? What will be the government budget surplus at the new equilibrium? **(2 marks)**

B2. Suppose that the demand for money function is given by $M_D = 2\ Y - 20\ i$ where M_D is the quantity of money demanded, i is the rate of interest (e.g., a value of 10 means 10 percent in this problem), and Y is real national income which currently is 100. The supply of money is 100. The price level does not change in this problem.

a) What is the expression for the demand for money curve corresponding to $Y = 100$? What is the equilibrium value for the interest rate? In a clearly labelled diagram, draw the demand for money and the supply of money curves placing i (the rate of interest) on the vertical axis and M (quantity of money) on the horizontal axis. **(3 marks)**

b) Suppose now that real national income increases from 100 to 160. What is the expression for the demand for money curve corresponding to $Y = 160$? Draw the new demand for money curve in your diagram above. If the supply of money remains at 100, what situation exists in the money market at the initial interest rate of part a) above? What will the new equilibrium value for the interest rate be if the money supply remains at 100? **(2 marks)**

c) Given the circumstances described in b) and assuming the Bank of Canada is determined to maintain an interest-rate target of 5 percent, what change in the money supply would be required. Be specific about the exact required change in the money supply. **(3 marks)**

d) Clearly explain how the Bank of Canada will induce the change in the money supply indicated in c) above. What will be the most likely impact of this change in the money supply on Y? **(2 marks)**

Professor Gazzale – Part IV

PART IV   [50%]

PART IV   **To be answered ONLY by students from Professor Gazzale's section (L0301)**

Answer **ALL** questions. When required to provide a numerical answer, show **ALL** the work necessary to arrive at the final answer.

Question 1   (21 marks)

For each question, indicate True, False, or Uncertain and briefly explain. While, **all** of the marks are earned based on the quality of the explanation, each can be explained concisely. **Each question is worth 3 marks.**

a) A profit-maximizing firm faces a perfectly elastic demand curve for its output. Hiring worker 12 would add 20 units of output, worker 13 would add 25 units of output, and worker 14 would add 15 units of output. **TFU:** The firm does not hire worker number 14.

b) Both Boblandia and Gazzalestan are currently at long-run equilibrium and both use the dollar as its currency. Each faces a decrease in autonomous exports equal to $10 million. **TFU:** If both countries face horizontal short-run aggregate supply curves, then both countries will have the same output gap.

c) **TFU:** Assuming no offsetting fiscal or monetary policy, a decrease in the marginal propensity to consume will lead to a decrease in real GDP.

d) Assume no population changes. **TFU:** If the unemployment rate has increased, then the number of individuals working for pay has decreased.

e) At the start of 2013, a Big Mac in the U.S. cost $4.37. In China, it cost 16 yuan. At the time, you could purchase $1 for 6 yuan. **TFU:** We expect the yuan to depreciate relative to the dollar.

f) Assume the only bank has in Boblandia has $100 million in deposits and $25 million in reserves. **TFU:** $1000 in new deposits will increase total deposits by $4000.

g) Make the standard assumptions of the labor-leisure choice model. Based on your current choice:

- you get 4000 total utils per week from leisure with the marginal utility of the last unit equal to 50.

- you get 5000 total utils per week from your income with the marginal utility of the last unit equal to 5.

TFU: Taking more leisure will increase your utility.

Question 2   (3 marks)

a) **(2 marks)** Identify the key component of a macro model of increasing returns and briefly explain how this might help explain a country that remains poor.

b) **(1 marks)** If productivity increases at 3% per year, approximately how many years will it take for productivity to double?

Question 3 (6 marks)

With unemployment insurance, one receives insurance payments when unemployed but not when employed. There is currently no unemployment insurance in Boblandia. You work for an insurance company, and your job is to assess the profitability of your company offering unemployment insurance to Boblandia workers: a purchaser would pay premiums while employed, and receive benefits when unemployed.

a) **(1 mark)** Briefly identify the **adverse selection** problem that would plausibly affect the profitability of offering this insurance.

b) **(2 marks)** Briefly explain one step either you or the government of Boblandia can implement in order to reduce or eliminate the potential adverse selection problem.

c) **(1 mark)** Briefly identify a **moral hazard** problem that would plausibly affect the profitability of offering this insurance.

d) **(2 marks)** Briefly explain one step either you or the government of Boblandia can implement in order to reduce or eliminate the potential moral hazard problem you identified.

Question 4 (10 marks)

The marginal willingness to pay for **each** of **THREE (3)** consumers is given in the following table. The good is provided at a constant marginal cost equal to $15.50. **Assume the good can only be bought and sold in integer quantities.**

Quantity	1	2	3	4	5	6	7	8
MWTP	$24	$21	$18	$15	$12	$9	$6	$3

a) **(2 marks)** Assumption: private good without externalities. Using standard assumptions, calculate:

   i) Total quantity transacted in a perfectly competitive free market without interventions.

   ii) The total quantity that maximizes total surplus.

   iii) The deadweight loss associated with the perfectly competitive free market without interventions.

b) **(3 marks)** Assumption: public good, but no additional externality. Using standard assumptions, calculate:

   i) Total quantity transacted in a perfectly competitive free market without interventions (i.e., the Nash equilibrium if we rely on voluntary contributions).

   ii) The total quantity that maximizes total surplus.

   iii) The deadweight loss associated with the perfectly competitive free market without interventions.

c) **(3 marks)** Assumption: private good with marginal external benefit equal to $5. Using standard assumptions, calculate

   i) Total quantity transacted in a perfectly competitive free market without interventions.

   ii) The total quantity that maximizes total surplus.

   iii) The deadweight loss associated with the perfectly competitive free market without interventions.

d) **(2 marks)** Briefly defining any and all ECO100 terms: In terms of characteristics, what distinguishes a private good from a public good?

<u>Question 5</u> (10 marks)

In all the questions below, <u>show all of your work</u>. Consider Boblandia:

Consumption Expenditure	$Y=100+Y^D\times\dfrac{8}{10}$
Investment Expenditure	$I=60+Y\times\dfrac{1}{10}$
Government Spending: Goods and Services	$G=150$
Taxes	$T=Y\times\dfrac{3}{8}$
Government Spending: Transfers	$TR=0$
Exports	$X=100$
Imports	$\Im=50+Y\times\dfrac{2}{10}$

a) **(3 marks)** First, what is the equation for (planned) aggregate expenditures? Then calculate:
   i) equilibrium GDP; and
   ii) the expenditure multiplier.

b) **(3 marks)** For the economy in equilibrium, calculate:
   i) the level of private savings;
   ii) the level of public savings; and
   iii) the current account balance.

c) **(2 marks)** Assuming no price changes, what is the change in public savings resulting from an increase in *G* from 150 to 160?

d) **(1 mark)** Assume that before the increase in *G,* equilibrium GDP was at its potential GDP. **TFU:** As a result of an increase in *G* from 150 to 160, the <u>short-run</u> increase in GDP equals 10 times the multiplier you identified in part a). (Very briefly explain.)

e) **(1 mark)** Assume that before the increase in *G,* the GDP was at its potential GDP. What will be the <u>long-run</u> change in GDP as a result of the increase in *G*? (You must clearly explain how we get from the GDP in part d) to the GDP in this question.)

PART V   [50%]

PART V   To be answered ONLY by students from Professor Wolfson's section
(L5101)

DO 2 QUESTIONS IN PART A AND 2 QUESTIONS IN PART B
(Each question is worth 12.5 marks, for a total of 50 marks)

PART A
DO 2 OF 3 QUESTIONS

Question 1 (Labour - Leisure Choice)

Emily can freely vary the number of hours she chooses to work over a 5-day work week of 120 hours. Her wage rate is $20 per hour. Initially there are no government regulations on hours of work; Emily chooses to work 50 hours per week.

1.1   With the aid of a fully labelled diagram, show Emily's initial equilibrium using indifference theory. Label this equilibrium as Point A.

1.2   The government now regulates that no worker shall work more than 40 hours per week. Now alter your diagram appropriately and show the new position if Emily abides by the new regulation. Label this as Point B. State clearly what has happened to Emily's level of satisfaction. Define the Marginal Rate of Substitution in this model. Indicate what has happened to its value (i.e., higher, lower, same) compared to the initial equilibrium.

1.3   Return to the original equilibrium, with no regulation. It is known that Emily's labour supply curve between a wage rate of $20 and $25 per hour is positively-sloped. Leisure is a normal good for Emily. Using a new indifference diagram, show the Substitution Effect (SE) and Income Effect (IE) between a $20 wage rate and a $25 wage rate.

Question 2 (Sole Supplier; Trade)

2.1   The Loony T Company is the sole supplier of T-shirts at certain skating shows. Its Total Cost Schedule is $TC = 5Q$. The demand schedule at a show is $P = 95 – 0.05Q$.

a)   Calculate these equilibrium values at a show: price, quantity, profits and consumer surplus.

b)   In a fully labelled, free-hand diagram, show the equilibrium. Include the values/areas for price, quantity, profits, consumer surplus and intercepts.

c)   Suppose the skating show promoter decides to charge Loony T a fee of $5,000 for the right to sell T-shirts at a skating show, irrespective of the number sold. Loony T does pay this amount. What happens to the values of price, quantity, profits, consumer surplus, and price elasticity of demand? (No diagram required. Do NOT add to diagram above.)

… see part 2.2 on next page

2.2 Two countries, Upper and Lower, can produce both wheat and logs, using labour input only. In Upper, 2 units of labour are required to produce 1 bushel of wheat and 3 units of labour to produce 1 log. In Lower, the labour inputs required are 6 and 12, respectively. Ignore transportation and other costs. Assume countries initially are producing both goods and always produce on their production possibility curves.

a) What is the opportunity cost of a unit of wheat in Upper?

b) Which country has a comparative advantage in the production of logs?

c) If the country in part b) increases its production of that good (in which it has a comparative advantage) by 40 units, by how much must it reduce the production of the other good?

d) If trade is to take place, the terms of trade must lie between what boundaries?
(Each boundary is a ratio of logs to wheat, or vice versa).

e) Upper has 1,500 labour units and is currently producing 150 units of wheat. If Upper exports one half of its current production at a terms of trade of 4 logs for 7 units of wheat, how many logs and units of wheat are available to its residents?

Question 3 (Competition)

Gadgets are produced by a perfectly competitive, constant cost industry, initially in long run equilibrium, with each firm having selected the most appropriate size of plant (i.e., amount of capital). Each firm has the traditional U-shaped short run cost curves. It is known that the minimum point of Average Variable Cost (AVC) occurs at a price of $50. It is also known that the minimum point of Short Run Average Cost (SAC) occurs at a quantity of 20 units.

3.1 In two fully labeled, interrelated diagrams (firm, industry), show the initial equilibrium.

3.2 Suppose the market Demand is $P = 100 - 0.01Q_D$ and the Market Short Run Supply is represented (for positive output) by $P = -20 + 0.02Q_S$. Find these values at the initial long run equilibrium: price (P), industry quantity (Q), number of firms (n), each firm's quantity (q), each firm's profits (Π).

3.3 Gadget producers create an industry association. All producers join the association. The association obtains the approval of the government to institute a quota system on its members. The association seeks to achieve a price of $80. What is the quota amount it needs to assign to each member? Explain how an effective quota system provides benefits to each member firm. Draw a diagram of the representative firm to illustrate.

3.4 Write a brief note on the challenges facing the association in ensuring the success of the quota system. Define the challenges, why they might occur, and how the association might respond to them. [No diagrams or equations needed!]

PART B
DO 2 OF 3 QUESTIONS

Question 4 (Constant Price Macro Model)

4.   The macro economy of Utopia can be described through the following equations:

Consumption	C = 20 + 0.75Yd	Investment	I = 10 + 0.2Y
Exports	X = 25	Personal Taxes	T = 16
Gov't Spending	G = 15	Full Employment	Y_F = 201
Disposable Income	Yd = Y – T	Imports	M = 10 + 0.2Y

Use the "constant price, simple model" (with no monetary sector) to answer the following:

4.1   What is the equation for Aggregate Expenditure (AE) in reduced form?

4.2   What is the value of equilibrium GDP?

To stimulate the economy, the Government of Utopia decides to reduce personal taxes.

4.3   What is the value of the tax multiplier?

4.4   By how much must taxes be changed (and in what direction) to reach the full employment equilibrium?

4.5   At the new equilibrium, what is the government's budget position? Provide a value and indicate if the budget is balanced, deficit or surplus.

4.6   Draw a free-hand diagram, fully labelled, to show the initial AE and equilibrium GDP and the new AE and equilibrium GDP after taxes have been changed. Show also the GDP Gap and the Deflationary Gap.

Now add a monetary sector to the model. Assume no change in the money supply.

4.7   What impact does the change in taxes you calculated above in 4.4 have on the rate of interest? Explain the sequence clearly. Use a <u>single diagram</u> of the money market in your answer.

4.8   If the government ever has a budgetary deficit as the result of its fiscal policy, how can it be financed if the money supply remains constant?

4.9   In this model, exports are constant. What does this imply about Utopia's exchange rate in the foreign exchange market? Explain briefly.

Question 5 (Money & Banking; National Accounts)

5.1   The banking system of Tiny country has a desired reserve ratio of 6%. Banks in Tiny initially have reserves exactly equal to that required by the reserve ratio and act always to maintain that position. Individuals and firms in Tiny carry out money transactions (in dollars) through demand deposits at banks (i.e. there is no currency drain). Further there are always willing borrowers to take up loans banks might offer.

a)   For each of the events below, taken separately, calculate the *final change* in the reserves and demand deposits in the banking system and the *final change* in the money supply. *(You will just have three numeric answers for each event; do NOT show balance sheets.)*

Event 1   As the use of debit cards increases, residents of Tiny reduce the amount of cash they carry by depositing $12M into their chequing accounts.

Event 2   Tiny's central bank sells $60M (domestic value) of foreign exchange to Tiny's firms in order to stabilize the value of the dollar on the foreign exchange market.

b)   Using balance sheets (T-accounts), demonstrate the impact on the money supply of the following event: *Government spending of $180M is financed by an increase in personal taxes of $180M.* Be sure to indicate the size of the change in the money supply.

5.2   Below are data from the national accounts of a country. Assume that all relevant items you need to answer the questions have been provided.

Corporate Profits Taxes	85	Capital Consumption Allowances	50
Net Domestic Income	1050	Personal Taxes	125
Balance of Trade	15	Indirect Taxes minus Subsidies	100
Gross Investment Spending	200	Imports	225
Corporate Profits before Taxes	150	Transfer Payments to Households	35
Gov't Spending on Goods & Services	285	Dividends Paid by Corporations	15
		Personal Consumption Expenditure	700

Use the above data to compute the following:

a   Gross Domestic Product (GDP)
b   Exports (X)
c   Personal Income (PI)
d   Personal Disposable Income (PDI)
e   Gross Domestic Expenditure (GDE)
f   Net Domestic Product (NDP)

Question 6 (Macro Model with Money)

The closed economy of Georgia is weakening, with rising unemployment. Its central bank responds by changing the money supply.

6.1 In what direction should the money supply be changed?

6.2 State one way by which the central bank can alter the money supply in the direction you determined in 6.1. Identify the method clearly, but you need not describe it in any detail or use balance sheets.

6.3 In a set of clearly labelled, interrelated diagrams, show the impact of such a change in the money supply on the rate of interest rate and GDP.

6.4 How does the interest elasticity of the investment demand schedule impact on your answer to 6.3 above? Use a single diagram in your answer. Now explain briefly how "business confidence" might affect the interest elasticity of investment demand.

6.5 Let's remove the assumption of a closed economy. Suppose Georgia is an open economy with a flexible exchange rate. Consider the impacts of the monetary change above by answering the following two questions.
[No diagrams needed; a clear explanation alone is sufficient.]

a) How does the change in GDP directly affect the exchange rate?

b) How does the change in the rate of interest directly affect the exchange rate?

REMINDERS:

Be sure that your name and student number are on the front cover of every booklet.

Indicate on the front cover of your booklet(s) that you are in the Wolfson Section.

Be sure you have your name and student number on the Scantron sheet
(and these have been "bubbled in")
plus all MC answers are on the Scantron sheet.
You must do all bubbling before time has expired!