The University of Alberta

Department of Economics

Economics 204 – A2
Midterm #1

Gordon Lee

October, 2014

Name Key

ID Number _____

You have 50 minutes to complete this exam.

Section A	
Section B	
Section C	
Total	

Section A: Short Answer Questions (6 points)

Question 1 (2 points)
Define Economics

The study of the actions people take and the choices they make in order to make the best use of scarce resources

Question 2 (2 points)
Mr Snivelling-little-rat-faced-git rents a house in Bolton for which he pays the landlord $12,000 per year. The house can be purchased for $100,000 and the tenant has this money in a bank account that pays 4 % interest per year. Is buying the house a good deal for this tenant? Briefly explain.

He should buy the house
The cost (forgone interest) = 4,000 < Rent

Question 3 (2 points)
Fill in the blanks

(a) Efficiency is one way to judge an allocation. Another way is equity or political consequence moral

(b) Market Failure is referred to as the Invisible Elbow.

Section B: Multiple Choice Questions (20 points)
Select the best answer.

1. During the nineteenth and early twentieth centuries, thousands of people immigrated to Western Canada. The effect on the Canadian economy was to
   a. move it beyond its production possibilities frontier.
   b. move it inside its production possibilities frontier.
   c. shift its production possibilities frontier inside.
   (d) shift its production possibilities frontier outward.
   e. none of the above - there was no change in Canada's production possibilities frontier.

2. You have decided to move from a one room apartment to a three bedroom house, and you must choose between a house in the city and one in the country that you like better. Which of the following would not be an opportunity cost of living in the country rather than in the city?
   a. The value of the extra time it will take you to drive to work each day.
   b. The value of the second car you will have to buy.
   (c.) The cost of the new furniture for the extra two bedrooms.
   d. All of the above would be opportunity costs of living in the country house over the city house.

3. Scotch Whiskey and Canadian Whiskey are considered by some people to be substitutes. An increase in the price of Scotch Whiskey will primarily:
   a. increase the demand for Scotch Whiskey.
   b. decrease the demand for Scotch Whiskey.
   c. decrease the quantity demanded of Scotch Whiskey.
   d. decrease the demand for Canadian Whiskey.
   e. decrease the quantity demanded of Canadian Whiskey.

Exhibit 3.5 Supply and Demand data

Price	Quantity Demanded	Quantity Supplied
$1.00	500	50
1.50	450	150
2.00	400	250
2.50	300	300
3.00	150	325

4. Exhibit 3.5 shows that the quantity demanded and quantity supplied of a certain commodity is a function of its price. If the price is $2.50,
   a. the market is in equilibrium.
   b. there will be excess demand.
   c. there will be excess supply.
   d. there must be a price ceiling in effect.

5. In the market for lupines, initially the equilibrium price was 10¢ per lupine and the equilibrium quantity was 200 million lupines. The following year the equilibrium price was 14 ¢ per lupine and the equilibrium quantity was 160 million lupines. This change could have been the result of
   a. a decrease in wages.
   b. an increase in taxes levied on producers of lupines.
   c. an increase the price of a complement.
   d. an increase in income.
   e. a decrease in the price of a substitute.

6. Suppose you learned that the price of men's shirts rose from an average of $18 in 1997 to an average of $27 in 1998 but that the quantity sold did not change. Which of the following would be the most likely explanation of what happened?
   a. An increase in consumer incomes.
   b. A decrease in the price of ties (a complement).
   c. An improvement in the production technology for making shirts.
   d. A decrease in the cost of labour of workers in the shirt making industry and the start of a successful advertising campaign promoting the purchase of shirts.
   e. An increase in the price of sweatshirts (a substitute) and an increase in the price of fabrics used to make shirts.

7. Suppose that an effective price floor is in place in the market for eggs. If the cost of producing eggs decreases,
   a. the shortage of eggs will increase.
   b. the surplus of eggs will increase.
   c. the quantity of eggs sold will increase.
   d. egg producers will earn more revenue from the sell of their eggs in the market.
   e. the price floor will become ineffective.

8. Suppose that a tax of $5 per unit of output is imposed upon producers of red herrings. In general, the price of red herrings will
   a. not change.
   b. increase by less than $5.
   c. increase by $5.
   d. increase by more than $5.
   e. decrease.

9. Diminishing marginal utility means that
   a. Ralph will enjoy his second hamburger less than the first.
   b. the utility from one hamburger exceeds the utility from two hamburgers.
   c. the price of two hamburgers is less than twice the price of one.
   d. beyond a certain point, total utility falls as income rises.
   e. a and b.

10. Suppose that the demand for product X is given by P = 32 – 2Q. If the price is 4, consumers' surplus equals
   a. $ 98.
   b. $ 196.
   c. $ 392.
   d. $ 400.
   e. None of the above.

$4 = 32 - 2Q \quad Q = 14$

Section C: Long Answer Questions (24 points)

Question 1(8 points)

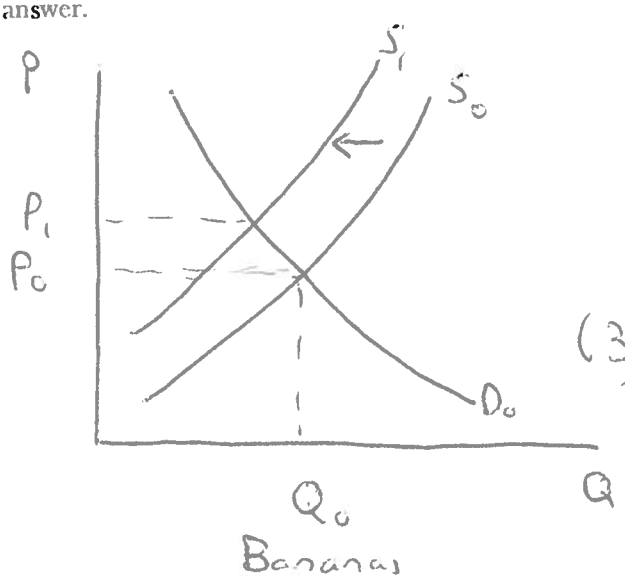
In Kerala, banana plantations were damaged in the heavy rains during June and July, causing a shortage and rise in prices. Bananas which used to sell at Rs30-40 per kg in the past year are now retailing at Rs50 - 60 per kg. (The Economics Times, October 3, 2014)

a. With the use of diagram, explain why the price of bananas has increased.

b. Over the period banana prices have been rising.
"Production of oranges in Nagpur has been very good and it has almost doubled this year." (The Economics Times, October 3, 2014)

Explain the impact that these two events will have the equilibrium price and quantity of oranges. Use a diagram in your answer.

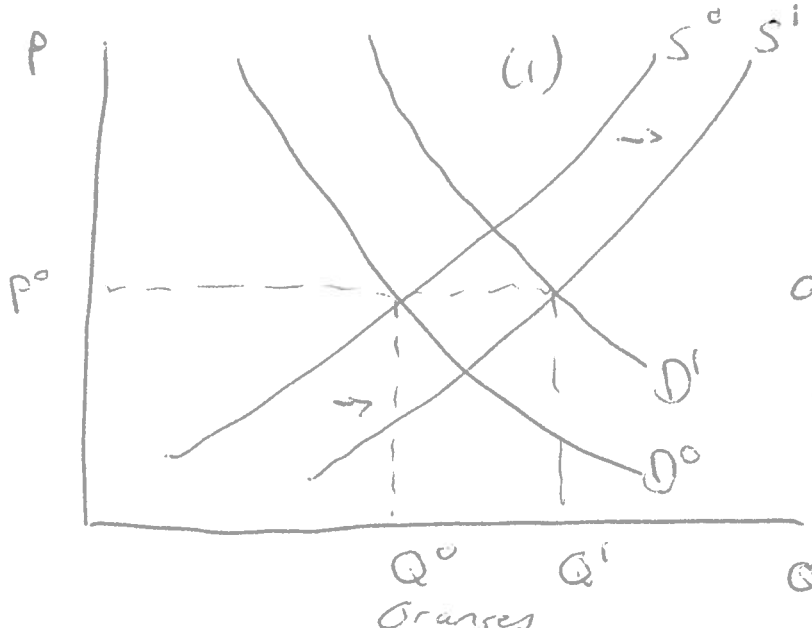
a.



$S \downarrow \Rightarrow P \uparrow$

(3)

b.



(1)

$S \uparrow$ (1)

and

$D \uparrow$ (1)

because bananas and Oranges are Substitutes (1)

Result: Equilibrium quantity has increased (1)

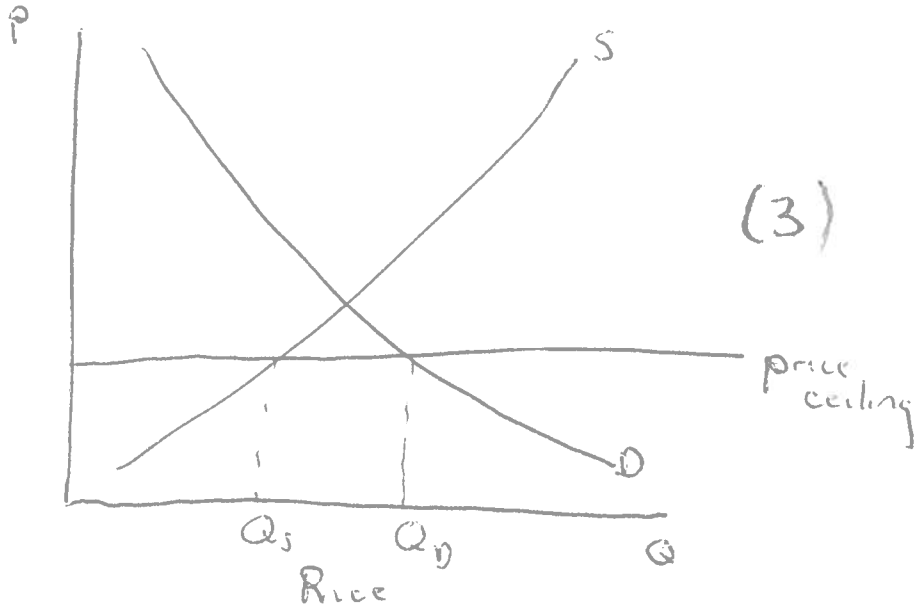
Uncertain impact on equilibrium price (1)

Question 2 (5 points)

A January 10, 2006, BBC article reported that since 2003, Venezuela President Hugo Chávez had been setting price ceilings on food, and that these price ceilings had caused shortages and hoarding. A January 22, 2008 article from Associated Press stated, "Venezuelan troops are cracking down on the smuggling of food... the National Guard has seized about 750 tons of food... Hugo Chavez ordered the military to keep people from smuggling scarce items like milk... He's also threatened to seize farms and milk plants..." On February 28, 2009 Chávez ordered the military to temporarily seize control of all the rice processing plants in the country and force them to produce at full capacity, which he alleged they had been avoiding in response to the price caps.

Describe how the price ceiling affects the market for rice (if it affects it at all) and draw a diagram representing the situation.

Is Chavez right? Are rice processing plants likely operating below full capacity? Briefly explain.



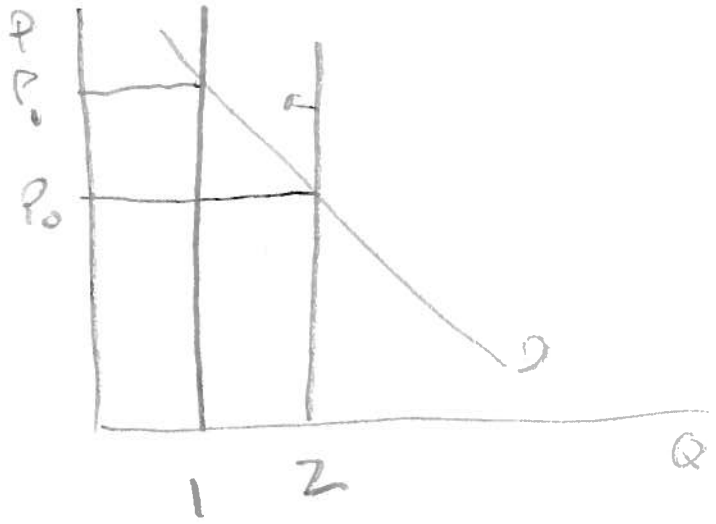
(3)

Price Ceiling results in a shortage

If full capacity is consistent with the initial equilibrium then yes (2)

Question 3 (6 points)

At a recent auction, Tarquin Fin-tim-lin-bin-whin-bim-lim-bus-stop-ftang-ftang-ole-biscuitbarrel bought the only two existing copies of the famous Freedonian 'Velvet Elvis' stamps. After the purchase, Tarquin Fin-tim-lin-bin-whin-bim-lim-bus-stop-ftang-ftang-ole-biscuitbarrel went to the front of the room and burned one of the stamps in front of the shocked audience. What must Tarquin Fin-tim-lin-bin-whin-bim-lim-bus-stop-ftang-ftang-ole-biscuitbarrel believe in order for this to be a wealth maximizing action? Explain with a demand supply diagram.



$P_1 > 2P_0$

Question 4 (5 points)

It is a hot day and Samuel Brainsample is thirsty. Here is the value he places on a bottle of water:

Value of the first bottle	$ 9
Value of the second bottle	$ 8
Value of the third bottle	$ 6
Value of the fourth bottle	$ 4
Value of the fifth bottle	$ 2

a. If the price of a bottle of water is $ 8, how many bottles does Samuel buy? How much consumer's surplus does he attain?

b. If the price of a bottle of water falls to $ 2.60, how many bottles does he buy? What is his consumer's surplus now?

a. $P = 8$ $\boxed{Q = 2}$ (1)

$CS = 9 - 8 = \boxed{\$1}$ (1)

b. $P = 2.60$ $\boxed{Q = 4}$ (1)

$CS = (9 - 2.60) + (8 - 2.6) + (6 - 2.60) + (4 - 2.6)$

$\boxed{CS = \$16.60}$ (2)

The University of Alberta
Department of Economics

Economics 204 – A2
Midterm #2

Gordon Lee

November 2014

You have 50 minutes to complete this exam.

Name Key

ID Number _____

Section A
Section B
Section C
Total

Section A: Short Answer Questions (12 points)

Question 1 (2 points)
Quoting Gervaise Brooks-Hampster: "The shareholders of a corporation have limited liability. This means, of course, that if a shareholder gets into a car accident that is the shareholder's fault, the other driver can only sue the shareholder for a limited amount."
Is Gervaise correct? Explain your answer.

No

limited liability means the firm's creditors do not have access to Gervaise personal assets.

Question 2 (5 points)
A Wall Street Journal Article dated September 9, 2007 states, "Higher grain prices are taking an increasing financial toll." Energy is an input into virtually all types of production; corn is an input into production of beef, chicken, high-fructose corn syrup and ethanol.

a. Explain how the cost of energy can be both a fixed cost and a variable cost for a producer.
b. Is the cost of corn a fixed cost or a variable cost to an ethanol producer?
c. What happens to the average total cost curve and the marginal cost curve of an ethanol producer when the price of corn increases?

a

b Variable cost

c ATC ↑

MC ↑

Question 3(4 points)
In class we listed 5 characteristics of a perfectly competitive market. LIST FOUR of these characteristics.

1. Homogeneous Product
2. Relevant Information
3. Freedom of Entry and Exit
4. Many Firms
5. Each firm is a price taker.

Question 4 (1 point)
In order to price discriminate, a firm must be able to prevent arbitrage. What does this mean?

Arbitrage buying at the low price, reselling below the high price

Section B: Multiple Choice Questions (18 points)
Select the best answer.

1. A difference between a stock in a corporation and a corporate bond is that
   a. the stock represents a legal claim while the bond does not.
   b. the bond holder has voting rights within the corporation while the stockholder does not.
   c. stocks are issued in return for funds that are lent to the corporation.
   d. the stock holder is entitled to a return whether or not the corporation makes a profit.
   (e.) None of the above.

2. The Whizzo Chocolate Company, makers of Anthrax Ripple Chocolates, has recently sold $ 8 million in shares to finance the construction of a new store. This is an example of
   a. debt financing.
   (b.) equity financing.
   c. indirect financing.
   d. conquest and control financing.
   e. structural financing.

3. For the Whizzo Chocolate Company, average variable cost (AVC) is $40 when output is 550 units and $41 when output is 551 units. Over this range of output we can conclude that marginal costs is
   a. equal to $1.
   b. greater than $1 but less than $40.
   c. greater than $40 but less than $41.
   d. $41.
   (e.) greater than $41.

4. If a firm is experiencing diseconomies of scale, then
   a. proportionate increases in all inputs result in proportionate increases in output.
   b. the long run average cost curve is rising as output increases.
   c. the long run average cost curve is falling as output increases.
   d. the firm should expand the size of its operation.
   e. b and d.

5. The following data were collected for a perfectly competitive profit maximizing firm;
   Current Output = 722
   MC, at the current output level = $6.00.
   ATC, at the current output level = $5.15
   As the long run equilibrium is approached,
   a. the firm's ATC will increase.
   b. the firm's marginal cost will increase.
   c. firms will exit the industry.
   d. the firm's profit will decrease.
   e. industry output will decrease.

6. X-inefficiency is a term used to describe a situation in which
   a. a monopolist may operate along a higher average total cost curve because there is no competitive pressure to force the firm to operate at the lowest cost structure.
   b. the monopolist produces an unknown amount of welfare loss by producing too little output.
   c. production of too much output causes resources to be used inefficiently.
   d. the monopolist and the buyer collude to share monopoly profits.

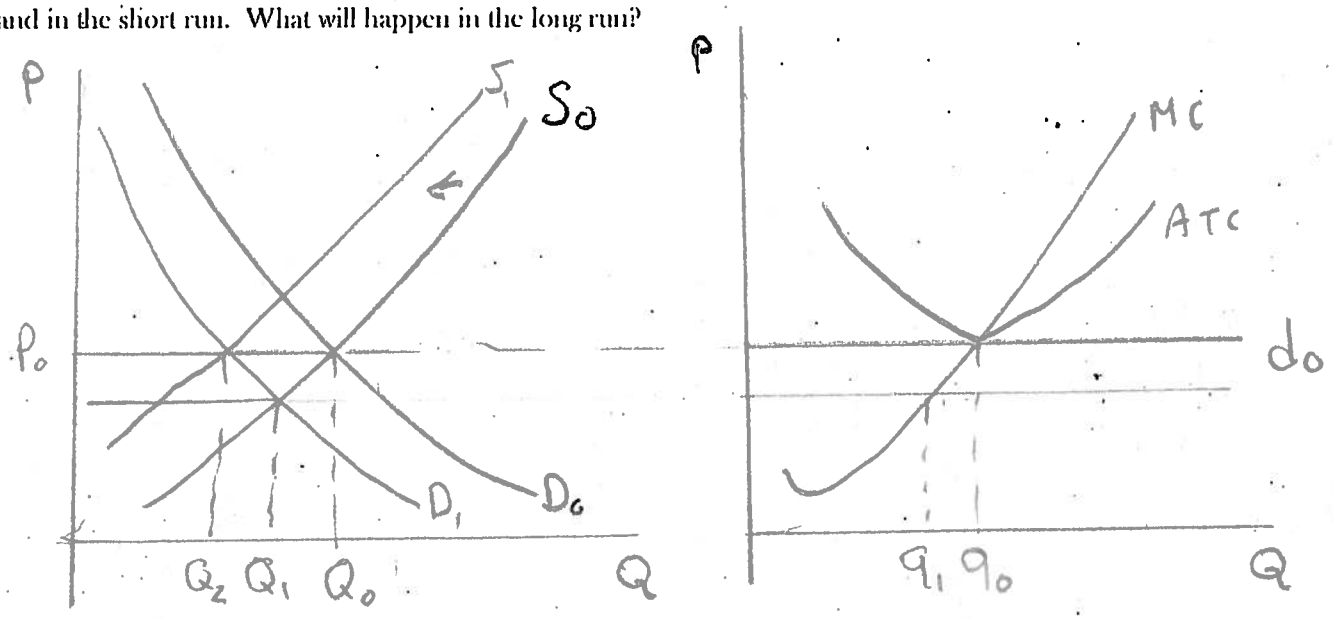
7. Under pure monopoly, the profit maximizing output could be conceivably at an output where all but one of the following equalities holds.
   a. Marginal revenue equals marginal cost.
   b. Marginal revenue equals average total cost.
   c. Price equals average total cost.
   d. Price equals marginal cost.
   e. Average revenue equals average total cost.

8. When the economic profits are positive in an industry that is monopolistically competitive, then
   a. firms will enter the industry, thereby increasing the demand for products of the firms originally in the industry.
   b. firms will exit the industry, and the demand will increase for products of the firms that remain.
   c. firms will exit the industry, and the demand will decrease for products of the firms that remain.
   d. firms will enter the industry, and the demand will decrease for products of the firms originally in the industry.
   e. eventually it will become monopolized.

9. In Hotelling's Boardwalk model,
   a. the sellers will engage in advertising to establish product differentiation.
   b. the sellers will locate at the quarter intervals of the beach and will collude.
   c. the sellers will find that their optimal positions are at the halfway point of the beach.
   d. one seller will leave the market.

Section C: Long Answer Question (20 points)
Complete the following three questions. Show your work.

Question 1 (6 points)
In the early 1970's, as a result of a grape boycott on behalf of striking agricultural workers, the demand for table grapes fell significantly. Assuming they are price takers, predict the grape growers' response to this decline in demand in the short run. What will happen in the long run?



Initially S_0, D_0 P_0 Q_0 q_0, d_0, $\pi = 0$

Short Run S_0, D_1, P_1, Q_1 q_1 d_1 $\pi < 0$

(3)

Long Run $\pi < 0 \Rightarrow$ exit q_0 $\pi = 0$
S_1, D_1, Q_2, P_0

(3)

Question 2 (8 points)

Bob, Bill and Ben Baxter have just made a documentary movie about their basketball team. They are thinking about making the movie available for download on the Internet and they can act as a single price monopolist if they choose to. Each time the movie is downloaded, their Internet service providdr charges them a fee of $4. The Baxter Brothers are arguing about what price to charge customers per download. The following table shows the demand schedule for the film

Price of Download	Quantity of Downloads Demanded	R	MR	TT
$10	0	0	—	
8	1	8	8	
6	3	18	5	
4	6	24	2	
2	10	20	-1	
0	15	0	-4	

a. Calculate the total revenue and marginal revenue per download. (1) (1)

b. Bob is proud of the film and wants as many people as possible to download. Which price would he choose? How many downloads would be sold?

c. Bill wants as much total revenue as possible. Which price would he choose. How many downloads would be sold?

d. Ben wants to maximize profit. Which price would he choose? How many downloads would be sold?

b. $P = 0$ $Q = 15$ (2)

c $P = 4$ $Q = 6$ (2)

d. $P = 6$ $Q = 3$ (2)

Question 3 (6 points)

Two cigarette manufacturers, Piranha Brothers Cigarettes and the Praline Cigarette and Pesticide Company, are faced with lawsuits from a province to recover the health care related expenses associated with cigarette smoking. Both cigarette firms have evidence that cigarette smoke causes lung cancer (and other related diseases). Provincial Crown attorneys do not have access to the same data used by cigarette manufacturers and thus will have difficulty recovering full costs without the help of at least one cigarette firm's study. The companies know that if neither company cooperates with the Crown attorneys and argue that there is no evidence that smoking causes cancer, each will face costs of $5 million. If both cooperate with the Crown attorneys and concede that cigarette smoke causes lung cancer, each will face liability costs of 20 million. If one firm cooperates while the other does not, the firm that cooperates faces costs of $2 million while the other firm has liability costs of $50 million.
Set up the payoff matrix and solve for the Nash equilibrium. SHOW YOUR WORK.

Piranha Brothers

	Do not Cooperate	Cooperate
Do not cooperate	-5, -5	-2, -50
Cooperate	-50, -2	-20, -20

Praline

Nash

Piranha
If Praline cooperates, I cooperate
if Praline doesn't cooperate, I cooperate

Same for Praline

Economics 204 - A2

University of Alberta

FINAL EXAM

Gordon Lee

December, 2014

You have 2 hours to complete the exam.

Name Key

ID Number _____

Section A

Section B

Section C

Total

Section A: Short Answer Questions (24 points)

Question 1 (3 points)
State how (if at all) each of the following events affects the location of a country's production possibilities curve.

a. The quality of education improves.

Shifts out

b. A ice storm in Quebec damages numerous production facilities.

Shifts in

c. The number of unemployed workers decreases.

no movement

Question 2 (1 point)
Under the Constitution Act, banking is a responsibility of which level of government?

The Federal Government

Question 3 (3 points)
Quoting Dr. Smoke=too-much; "Every dollar in Canada is backed by an equivalent value of a commodity, typically good or silver. This backing gives our money its value."
Is Dr. Smoke-too-much- correct?> Briefly explain your answer.

No we Fiat money

Laws back our money's value and beliefs

Question 4 (3 points)
Indicate whether the following events will be directly included in the calculation of Canada's GDP.

Event	Included in Canadian GDP
Canadian jazz guitarist Ted Quinlan performs at a concert in Toronto	yes
Toyota earns profits from its car factory in Southern Ontario	yes
Canadian firm Tim Horton's produces and sells doughnuts in New York city.	no

Question 5 (4 points)
List the four different functions of money as discussed in class.

1. Medium of Exchange
2. Unit of Account
3. Store of Value
4. Standard of Deferred Payment

Question 6 (3 points)
In terms of value, what are the top three products that Canada exports?

Motor Vehicles
Oil
Boilers, etc.

Question 7 (2 points)
"Canada has a comparative advantage over Scotland in the production of forestry products." Briefly explain what comparative advantage means.

Here it means that Canada can produce a unit of lumber at a lower opportunity than Scotland can

Question 8 (5 points)
List five areas in which the market is said to fail.

1. Income Distribution
2. Imperfect Competition
3. Public Goods
4. Open Access Resources
5. Asymmetric Information
6. Externalities

Section B: Multiple Choice Questions (26 points)
Choose the **best** answer to the following twenty questions

1. Michigan has an abundant supply of fresh water. However, an economist would consider it a scarce resource because
   a. water is necessary for humans' physical survival.
   b. pollution will eventually destroy all life in the great Lakes.
   (c.) water is limited relative to people's unlimited wants.
   d. water commands a very high price.
   e. nature can destroy water as well as create it.

2. Which of the following would lead to a movement along, but no shift in, the demand curve for spinach?
   a. Disastrous weather that destroys about half of this year's spinach crop.
   b. A newly discovered increase in the nutritional value of spinach.
   c. An increase in the price of broccoli, a substitute for spinach.
   d. An increase in income for all spinach lovers.

3. Suppose that a recent and widely circulated medical article reports new benefits of exercise. Simultaneously, the price of the parts needed to make bikes falls. What is the likely effect on the equilibrium price and quantity of exercise bikes sold?
   a. Price of exercise bikes decreases and quantity sold remains the same.
   b. The change in the price is ambiguous but the quantity sold increases.
   c. Price of exercise bikes increases and quantity sold also increases.
   d. Price of exercise bikes remains the same and quantity sold increases.
   e. The change in the quantity sold is ambiguous but the price increases.

4. If an effective price ceiling is in effect and if the demand for the product decreases, we can be certain that
   a. the quantity exchanged would increase.
   b. the quantity exchanged would remain constant.
   c. a decrease in the amount of excess supply.
   d. a decrease in the amount of excess demand.
   e. b and d.

5. The "Cherries for all" farm is selling cherries at $3 per kilogram and earns total revenue of $300. The manager decides to increase the price to $4 per kilogram but his decision reduces the total revenue to $240. Which one of the following is a good explanation for what happened?
   a. The demand for cherries inelastic.
   b. The demand for cherries is perfectly inelastic.
   c. The demand for cherries is perfectly elastic.
   d. The demand for cherries is unit elastic.
   e. The demand for cherries is elastic.

3 100
4 60
$\eta_D = \frac{40}{1} \cdot \frac{3.5}{80}$

6. If the total cost of producing 10 units is $100 and the marginal cost of the 11th unit is $21, then
   a. variable costs of 11 units are $121.
   b. fixed costs are $79.
   c. the marginal cost of the 10th unit is more than $11.
   d. the average total costs of 12 units are $12.
   e. the average total costs of 11 units are $11.

10 100
11 121

7. Suppose a monopolist can sell 20 units of output per day for a price of $ 10 each and 21 units of output per day for $ 9.80 each. The marginal revenue for the 21st unit sold is equal to
   a. $ 0.
   b. $ 0.20.
   c. $ 5.80.
   d. $ 9.80.
   e. uncertain, as not enough information is given to compute the marginal revenue.

10 200
9.8 21

8. Anne Elke quit her job as an insurance agent to return to school full time to earn an MBA degree. With the degree in hand she is now searching for a position in management. Anne presently is
   a. cyclically unemployed.
   b. structurally unemployed.
   c. frictionally unemployed.
   d. not in the labour force.

9. Setup Corporation buys $100,000 of sand, roc and cement to produce redi-mix concrete. The corporation is willing to sell its product at $20 a cubic metre. However, it sells 10,000 cubic metres of concrete at $30 dollars a cubic metre. The value added by the setup Corporation is
   a. $300,000.
   b. $200,000.
   c. $100,000.
   d. 0

10. In the base year, the price index
   a. will be greater than 1 but less than 100.
   b. will always be equal to 100.
   c. equals 100 times the price of the market basket in that year.
   d. will equal the year.

Table 24.1

Currency outside of the Chartered Banks	$ 45 Billion
Notice Deposits at Chartered Banks	$ 367 Billion
Checking Deposits at Chartered Banks	$ 61 Billion
Foreign Currency Deposits held by Canadian Residents	$ 12 Billion
Money Market Mutual Funds	$ 36 Billion
Deposits held in Trust Companies, etc	$ 173 Billion

11. Given the information in Table 24.1, the value of M2 is
   a. $ 473 Billion.
   b. $ 106 Billion.
   c. $ 682 Billion.
   d. $ 694 Billion.
   e. None of the above.

12. If the Bank of Canada sold $10 million of securities to bank customers in the open market,
   a. deposits in the banking system would initially rise by $10 million.
   b. deposits and reserves of banks would initially fall by $10 million.
   c. the money supply would eventually increase by ($10 million/r) where r is desired reserve ratio.
   d. the money supply would eventually decrease by ($10 million/r).
   e. b and d.

In the following table, the data represent full employment production possibilities for the two nations of Dem and Rep. All data are in thousands of kilograms.

Dem			Rep		
Peaches	Cream		Peaches	Cream	
80	0	A	40	0	F
60	20	B	30	15	G
40	40	C	20	30	H
20	60	D	10	45	I
0	80	E	0	60	J

Dem
1 peach = 1 cream
Rep
1 peach = 1.5 cream

13. Based on the information in the table above, we may conclude that
   a. Dem has a comparative advantage in both goods.
   b. Dem has a comparative advantage in neither good.
   c. Rep has a comparative advantage in peaches.
   d. Rep has a comparative advantage in cream.

Section C: Long Answer Questions (40 points)
Do 5 of following 8 questions. Each question is worth 8 points. Show your work.

Question 1

a. Consider the following information:

> **This year's wheat harvest was the biggest ever, but the durum crop – the type of wheat used for pasta – was the smallest in 13 years. As a result, pasta makers face the highest costs in four years,...**
> The global durum crop is down 12 percent from a year ago to 33.3 million metric ton, according to the International Grains Council..
> By REUTERS **NOV. 5, 2014**

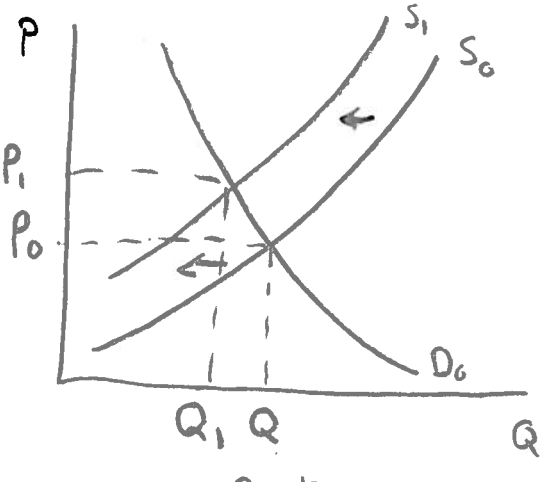
Using a diagram, illustrate the impact of this event on the market for pasta.

b. While the above event was occurring;

> The number of restaurants in Head Smashed In Buffalo Jump that serve Chinese food has increased by an amazing 245 % over the last two years. Analysts are puzzled by this rapid growth but are pleased by the increased competition.
> By The Incredibly Fictional Press(Sun News?) November 72, 2014.

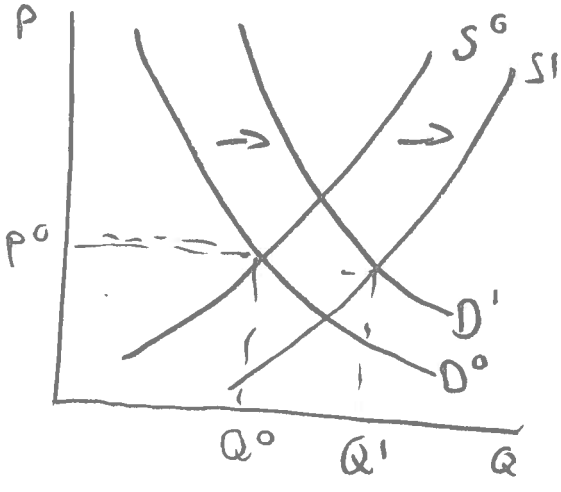
Analyze the impact of these two events, the event from part a and the event described above upon the market for Chinese food. Note that Chinese food and pasta are substitutes. What will happen to the equilibrium price and quantity of Chinese food? Use a diagram in your answer.

a.



P ↑
Q ↓ (3)

b.



P_{pasta} ↑ ⇒ $D_{Chinese\ Food}$ ↑

new rest ⇒ S ↑

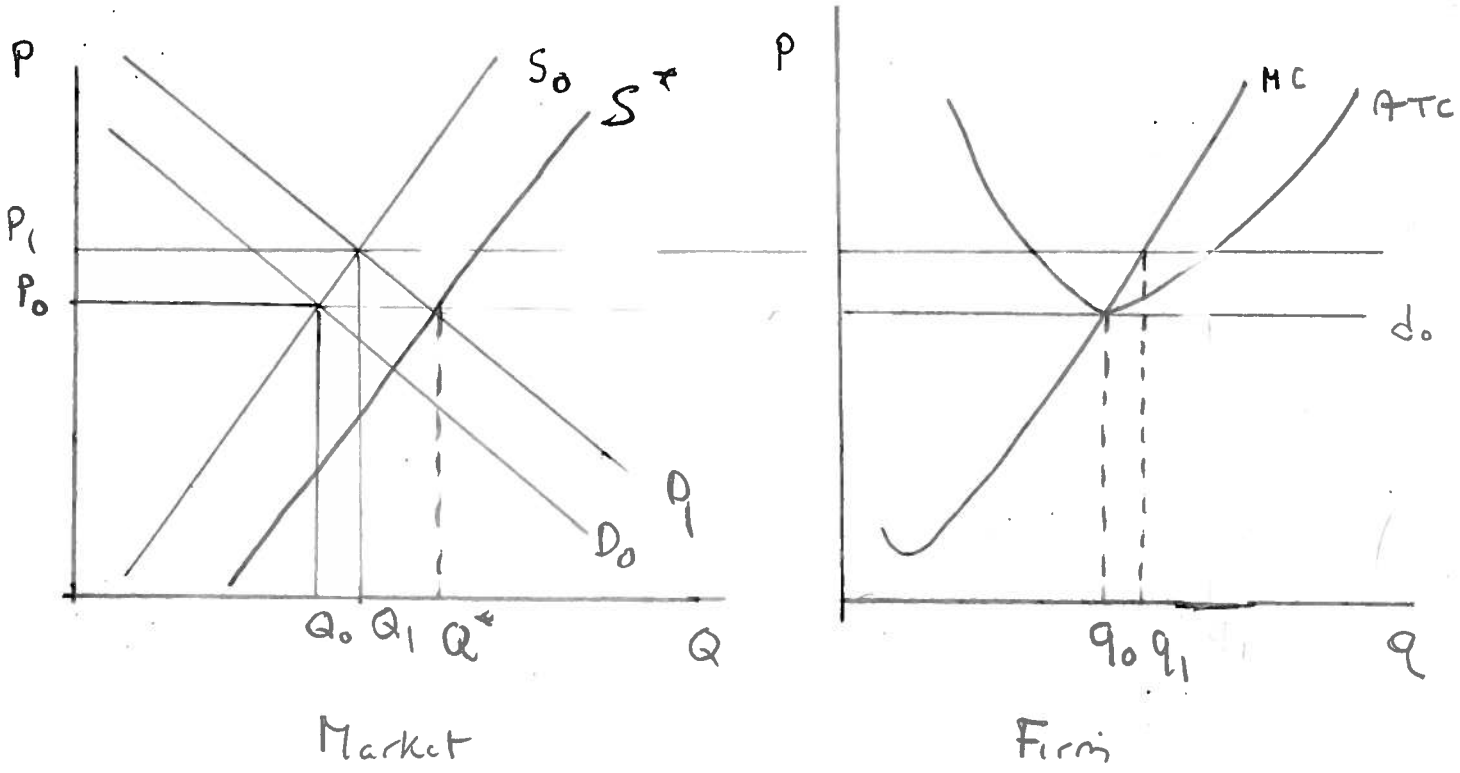
Q ↑ P ? (5)

Question 2

The Praline Company produces porcelain lupines. The porcelain lupine market in Freedonia, where the Praline Company is located, is perfectly competitive. Suppose that currently the market is in a long run equilibrium with the price of porcelain lupines at $180 per metric ton.

Praline's economist, Ken Cleanairsystems, informs you that porcelain lupines are normal goods, substitutes of ceramic roses and are produced by highly skilled unionized labour. Further, the president of Freedonia, Rufus T. Firefly, is a collector of porcelain lupines. Finally, Ken tells you that due to input shortages in the neighbouring country of Anviliania, the price of ceramic roses is permanently increasing.

With the use of **diagrams**, explain what impact this event will have upon the market for porcelain lupines in the short run and the long run.



Market Firm

Initially S_0, D_0, P_0, Q_0 d_0 q_0 $\pi = 0$

Short Run D↑ S_0, D_1 P_1 Q_1 d_1, q_1 $\pi > 0$ (4)

Long Run $\pi > 0 \Rightarrow$ entry $\Rightarrow S\uparrow$

D_1 S^*, P_0, Q^* d_0, q_0 $\pi = 0$ (4)

Question 3

In Freedonia, the government owns the only company, Freedu, that produces and sells Freedu Reactors. These nuclear reactors are sold only to domestic customers. The cost and demand data for Freedu reactors is given below

MR	R	Demand Data: Price (millions of $)	Demand Data: Quantity Demanded
–	16.50	$5.50	3
3.50	20.00	$5.00	4
2.50	22.50	$4.50	5
1.50	24.00	$4.00	6
0.60	24.50	$3.50	7
-0.50	24.00	$3.00	8
-1.50	22.50	$2.50	9

Cost Data: Output	Cost Data: Marginal Costs (millions of $)
3	-----
4	$1.00
5	$0.50
6	$1.50
7	$2.50
8	$3.00
9	$3.50

a. Determine the profit maximizing level of reactors. What is the profit maximizing price?

b. Mr. Jones-Fruitbat-Gilbert states, "Since this monopoly is government owned, we do not need to worry about the wastes of monopoly. All of the profits are government revenues and thus a return to the taxpayers." Do we not need to worry about the wastes of this monopoly?

a. Q = 6 P = 4.00 (6)

b. He is wrong. Dead weight loss still exists (2)

Question 4

Two firms at the St. Louis airport have franchises to carry passengers to and from hotels in downtown St. Louis. These two firms, Metro Limos and Urban Limos, operate nine passenger vans. These two firms cannot compete with price but they can compete through advertising. If both firms advertise, Metro earns $2500 a week in profits while Urban earns $1500 a week in profits. If Metro advertises and Urban does not, Metro earns $3000 in profits and Urban earns $0 profits. If Urban advertises and Metro does not, Urban earns $2000 a week in profits while Metro earns $1600 in profits. Finally, if neither firm advertises, Metro earns $4000 a week in profits while Urban earns $500 a week in profits.

a. Set up the payoff matrix to represent the above information. What is the Nash equilibrium? Explain your answer.

b. Senator Gumby wants to put a halt to the advertising. "Their commercials always interrupt my viewing of the Bill Maher Show." He wants to impose a fine for advertising of $1000. Now what is the Nash equilibrium? Explain.

Urban \ Metro	Ads	No Ads
Ads	2500, 1500	1600, 2000
No Ads	3000, 0	4000, 500

Metro If U ads I ad
If U no ads I no ads } No dominant strategy

Urban If M ads I ad
If M no ads I ad } always ad (5)

Nash Metro ads, Urban ads

U \ M	Ads	No Ads
Ads	1500 500	1600 1000
No Ads	2000 0	4000 500

Nash (3)

Question 5

The following table provides information about the Canadian economy for a seven year period.

Year	Real GDP 1986 prices (billions $)	Labour Force (thousands)	Unemployed (thousands)	Employed (thousands)	Unemployment Rate (percent)	Population (millions)
1985	489.4	12,532	___a___	11,221	10.461	25.2
1986	505.7	12,746	1,215	___b___	9.532	25.3
1987	526.7	13,011	___c___	___d___	8.839	25.6
1988	553.0	13,275	1,031	___e___	___f___	25.9
1989	565.8	13,503	1,018	12,485	7.539	26.2
1990	563.1	____g____	1,109	12,572	8.106	26.6
1991	553.5	13,757	1,417	12,340	___h___	27.0

(i) Find the values for

a 1341

b 11531

c 1150

d 11861

e 12244

f 7.76%

g 13681

h 10.3%

(4)

(ii) Calculate the percentage change in real GDP between 1987 and 1988. Compare this value with the percentage change in employment in this period. Do the same analysis for the two year period 1990-91.

Δ RGDP = 4.99% Δ emp = 3.23%

Δ RGDP = -1.705% Δ emp = -1.85%

(2)

(iii) Does there appear to be a positive or negative relationship between real GDP and employment for these two periods?

A positive relationship

(1)

(iv) Between 1989 and 1990 the unemployment rate increased while employment increased. How is this possible?

labour force ↑

(1)

Question 6

You may not have been aware, but last week a policy analyst made a presentation here at the University of Alberta. His presentation was in regards to macroeconomics performance of Canada. The analyst, Oliver St. John-Mollusc is fairly well known. His father was a cabinet minister in the government of Brian Mulroney. His mother was the winning entrant in the 1963 Kentucky Derby.

Quoting Oliver;
"A recent United Nations study concluded that Canada is the best country in which to live – that Canada has the highest quality of life. I, however, dispute this. Canada's nominal gdp per capita is below several countries in the world. Clearly this indicates that this country is not the best country to live in."

Is Oliver correct? Fully explain your answer.

1. Should look at real not nominal
2. does not consider income distribution
3. does not measure non-market activities
4. does not capture env. degradation
5. human rights issues

any four

Question 7

Star Bank, a chartered bank in Freedonia that currently has $300 million in deposits, has been operating with a desired reserve ratio of 0.5 %.

a. Show Star Bank's T account.

b. Anne Elke has just inherited the equivalent of $ 1 million Freedonian from a relative living in Denmark and deposits this money into this bank.
Suppose the bank continues to operate at the 0.5 % desired reserve ratio, show its T account now.

c. If other Freedonian banks also had a 0.5 % desired reserve ratios and there is no currency drain what will be the final change in the Freedonian money supply?

d. Suppose the Star Bank is worried about the state of the economy and decides to hold Anne's deposit in reserves instead of loaning it out. Now what will be the final change in the Freedonian money supply?

e. Assume that the scenario in b holds. However, now suppose t hat the Freedonian public holds 2 % of its money holdings in the form of currency. Determine the impact of the $ 1 million deposit on the Freedonian money supply.

a.

Star Bank	
Res 1.5	Dep 300
Loans 298.5	

(1)

b

Star Bank	
Res 1.505	Dep 301
Dep 299.495	

(2)

c. $\Delta MS = \frac{1}{0.005} = 20$ (2)

d. $\Delta MS = 1$ million (1)

e $\Delta MS =$ . . (2)

Question 8

The country of Notlob produces lupines and zailings. Notlob has 1600 workers. Further it takes 2 worker/day to produce 1 lupine and 6 workers/day to produce 1 zailing.

Potsylvania also produces lupines and zailings. This country has 2400 workers.
In Potsylvania it takes 4 workers/day to produce a lupine and 7 workers/day to produce I zailing.

a. Write an equation for the ppf of Notlob
b. Write an equation for the ppf of Potsylvania.
c. Which country has the comparative advantage in producing lupines?
d. Suppose currently, each country splits its labour equally between lupine production and zailing production. Can trade make these countries better off. Fully explain, with calculations, your answer.

a. $2L = 1600 - 6Z$ $\quad L = 800 - 3Z$ (1)

b. $4L = 2400 - 7Z$ $\quad L = 600 - \frac{7}{4}Z$ (1)

c. Notlob: to produce 1 more lupine, must give up $\frac{1}{3}$ Z
Pots: to produce 1 more lupine must give up $\frac{4}{7}$ Z (2)

d.

		Notlob		
Currently	Notlob	400 L	$\frac{400}{3}$ Z	133.3 Z
	Pots:	300 L	$\frac{1200}{7}$ Z	$171\frac{3}{7}$ Z
Specialize	Notlob	800 L	0 Z	
	Pots	0 L	$\frac{2400}{7}$ Z	$342\frac{6}{7}$ Z

(4)

dct can trade beyond each country's ppf